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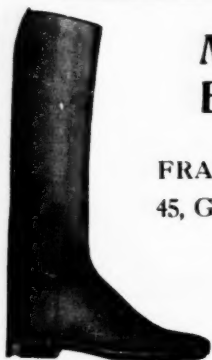
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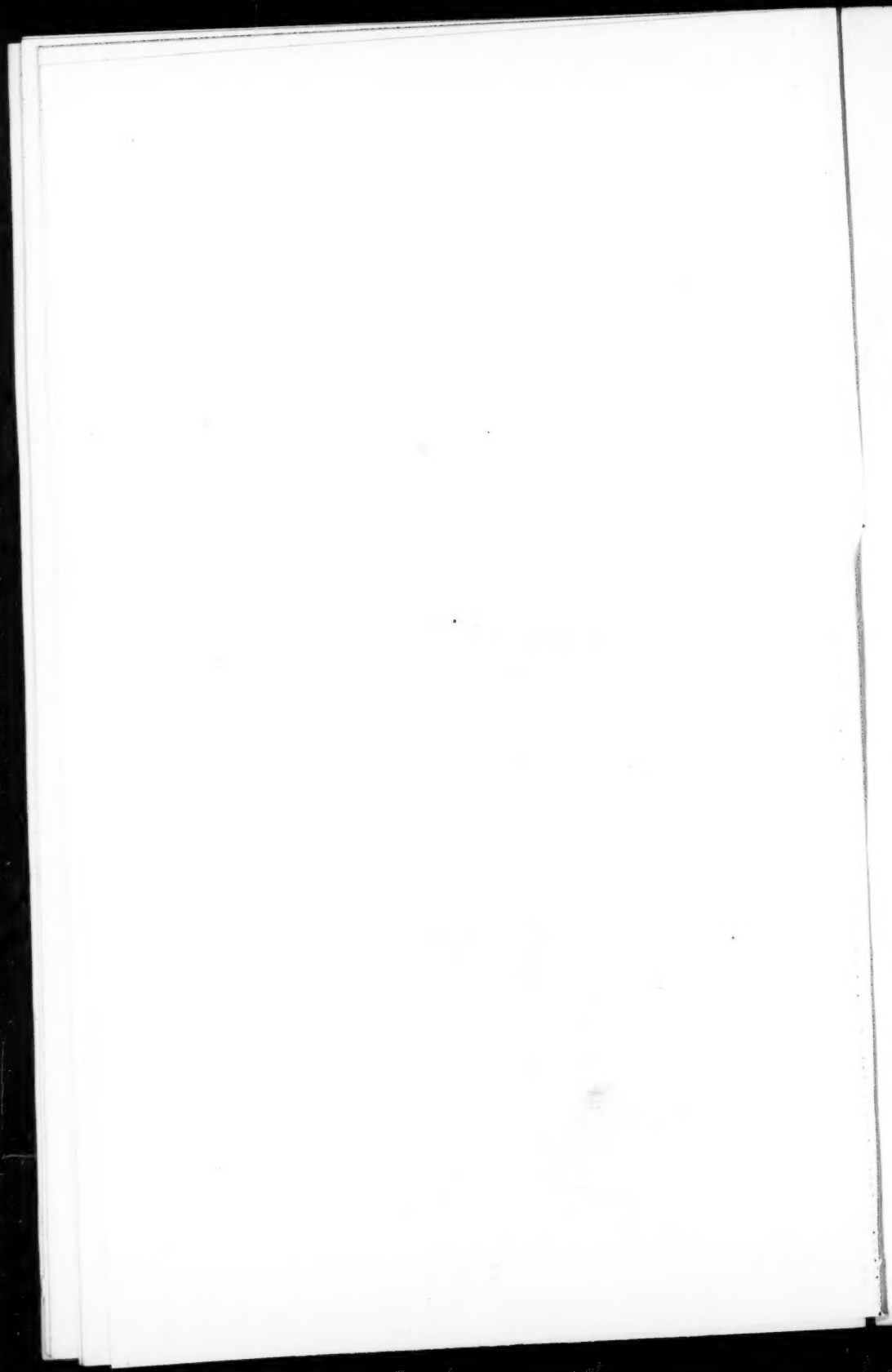
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ROYAL UNITED SERVICE INSTITUTION

NOVEMBER, 1911

SECRETARY'S NOTES.

I. NEW MEMBERS.

The following officers joined the Institution during the month of October:—

Lieutenant-General Sir J. S. Ewart, K.C.B., A.D.C., Adjutant-General to the Forces.

Lieutenant-Colonel E. M. Esson, late Yorkshire Regiment.

Lieutenant-Colonel W. A. Morris, R.A.M.C.

Captain H. J. U. Wilkins, South Lancashire Regiment.

Captain N. D. Walker, R.A.M.C.

Lieutenant C. V. L. Norcock, R.N. (retired).

Lieutenant H. F. P. Rees, R.M.L.I.

Captain C. H. Straton, R.A.M.C.

Lieutenant-Colonel T. S. Lloyd-Barrow, R.A.M.C., (retired).

Captain C. A. Barker, Wiltshire Regiment.

C. R. Dunlop, Esq., Junior Counsel to the Admiralty.

Captain L. D. W. Sayers, A.S.C.

Captain J. H. S. Westley, Yorkshire Regiment.

Captain E. Campion, Seaforth Highlanders.

Second-Lieutenant H. J. Bell, Surrey Yeomanry.

Captain C. R. Crowdy, R.A.

Lieutenant H. B. Rawlings, R.N.

Second-Lieutenant W. H. C. Brownlow, Northumberland Fusiliers.

Second-Lieutenant W. G. G. Leveson-Gower, Inns of Court O.T.C.

Major G. D. Goodman, 6th Bn Sherwood Foresters.

Lieutenant J. W. Rainier, R.N.

Lieutenant H. Smithers, 4th Bn. Royal West Kent Regiment.

Second-Lieutenant A. J. Trousdell, Royal Irish Fusiliers.

Second-Lieutenant J. B. Taylor, Somersetshire Light Infantry.

Colonel H. W. Murray, late A.M.S.

Major R. F. Pearson, O.T.C.

Lieutenant R. H. de Salis, R.N.

Colonel R. N. Gamble, D.S.O., h.p.

Captain E. ff. W. Lascelles, 3rd Dragoon Guards.

Commander C. W. R. Hooper, late Royal Indian Marine.

Lieutenant A. H. F. Young, late R.N.R.

Lieutenant H. Q. Irwin, Connaught Rangers.

Captain C. S. Northcote, Bedfordshire Regiment.

Colonel H. J. F. Parsons, 3rd Bn. London Regiment.

Second-Lieutenant W. G. Shaw-Stewart, Coldstream Guards.

Second-Lieutenant D. M. B. Hall, Coldstream Guards.

II. EXTRA LECTURE (not included on the Lecture Card).

Brigadier-General F. I. Maxse, C.B., D.S.O., will deliver a lecture on Tuesday, December 19th, at 3 p.m., on "Infantry Organization." General Sir J. D. French, G.C.B., G.C.V.O., K.C.M.G., A.D.C., will preside.

III. ADDITIONS TO THE MUSEUM.

- (6368). Uniform of the 13th Light Dragoons, formerly the property of Private W. Sewell, and worn by him in the Light Cavalry Brigade Charge at Balaclava, October 25th, 1854.
- (6373). Five Topographical Aquatints of the Field of Waterloo, published in 1816 from the drawings of Mr. S. Wharton. viz. :—
1. La Belle Alliance.
 2. View of the Situation and Wood of the Chateau Goumont.
 3. North side of the Chateau Goumont.
 4. View of the Farm of La Haye Sainte and features of the ground around it.
 5. Entrance to the Farm of La Haye Sainte.
- (6374). A Coloured Engraving of Captain Lord Cochrane, R.N., M.P.

Captain Lord Cochrane, afterwards Admiral, 10th Earl of Dundonald, G.C.B., a distinguished naval officer, who, entering the Navy in 1792, rose rapidly in his profession. While still serving, he was elected M.P. for Westminster in 1807, where he distinguished himself for his bitter attack on Lord Gambier for his failure to destroy the French Fleet in Aix Roads in April, 1809, which led to that officer's trial by court martial and acquittal. In 1814 Cochrane was expelled from the House of Commons, dismissed from the Navy, and sentenced to a heavy fine and imprisonment for his supposed complicity in the De Berenger frauds, although his innocence was afterwards completely established. In 1817 he accepted the offer of the Chilian Government, then fighting for its independence with Spain, to organize and command the Chilian Fleet, a task which he accomplished with brilliant success, taking a leading part in the war. Later he performed a similar service for Peru, Brazil, and Greece. In 1831 he succeeded to the title, and in 1832 he was reinstated in the Navy as a Rear-Admiral, and restored to the Order of the Bath, receiving the Grand Cross in 1847. After holding the command in North America, he died in 1861.

- (6375). Colours of the 2nd Battalion 54th (West Norfolk) Regiment. The battalion was raised in Ireland in 1800, and saw active service in Egypt, being present at the battle of Alexandria, and the capture of Fort Marabout. . . It was disbanded at Gibraltar in 1802.—Given by Mrs. Hughes.

IV. MUSEUM PURCHASE FUND.

Some Members of the Institution having expressed a wish that a Fund should be opened for the purchase of suitable Exhibits, which are from time to time offered to the Museum, and which are put up for sale at various auctions; the Council have decided that such a Fund should be formed, and hope that it will receive support from Members of the Institution, especially those who are interested in the Museum. Subscriptions and Donations will be acknowledged in these notes, and the manner in which same are used will be duly recorded in the Annual Report.

The following Subscriptions have been received :—

Captain B. E. Sargeant, £1 1s. od.

Lieutenant-Colonel A. Leetham, £5 5s. od.

V. CHANGES OF ADDRESS.

Members are reminded that only one change of address can be registered at a time; when that address is changed again, it is necessary to inform this office of such further change. The 9th day of the month is the last day on which such change can be notified, in order to take effect for the delivery of the JOURNAL of the current month.

VI. REGIMENTAL COLOURS.

The Institution is prepared to arrange for the repairs to Regimental Colours and Cavalry Standards, in service or otherwise. The staff of this department has recently been augmented, and in future there should be no delay, more than necessary, in executing the work. A very large number have been received during the past twelve months.

VII. MAP OF TRIPOLI AND THE MEDITERRANEAN.

It is announced, in reply to enquiries on this subject, that a certain number of copies of the map of Tripoli (Plate IV.) which appeared in the October JOURNAL are available, and can be purchased by members for 3d. a copy, including postage.

VIII.—GOLD MEDAL ESSAY, 1911.

The following Essays have been received :

- i. "Suaviter in Modo, fortiter in re."
- ii. "Check Mate."
- iii. "While there's life, there's Hope."
- iv. "We take up the task eternal and the burden and the lesson."
"Pioneers. O. Pioneers."
- v. "Tell the Truth"
- vi. "Fortis qui prudens."
- vii. "Qui von profecit, deficit"
- viii. "Suit the action to the word."
- ix. "Hold fast the friends thou hast."
- x. "Ce n'est pas á coups de lois, mais par le fer et par le sang, que se crée une Armée."
- xi. "Ad Rem."
- xii. "Fiat lux."
- xiii. "If the Iron be blunt, &c., &c."

PRINCIPAL ADDITIONS TO LIBRARY.

October, 1911.

- Secret Service in South Africa.** By Douglas Blackburn and Captain W. Waithman Caddell. 8vo. 10s. 6d. (Cassell & Co., Ltd.) London, 1911.
- My Naval Career and Travels.** By Admiral of the Fleet the Rt. Hon. Sir Edward H. Seymour. 8vo. 10s. 6d. Illustrated. (Smith, Elder & Co.) London, 1911.
- The Rise of Louis Napoleon.** By F. A. Simpson. 8vo. 12s. (John Murray). London, 1909.
- The Corsican, A Diary of Napoleon's Life in his own words.** Compiled by R. M. Johnston. Crown 8vo. 7s. 6d. (Macmillan & Co., Ltd.) London, 1911.
- A System of Syphilis.** Edited by D'Arcy Power and J. Keogh Murphy (Oxford Medical Publications, Vol. 6). 8vo. 42s. od. (Henry Frowde. Oxford, 1911.
- Essays and Criticisms.** By the Military Correspondent of the Times. 8vo. 7s. 6d. (Constable & Co., Ltd.) London, 1911.

- Joachim Murat, Marshal of France and King of Naples.** By A. Hilliard Atteridge. 8vo. 10s. 6d. Illustrated. (Methuen & Co., Ltd.) London, 1911.
- The Revolutionary War and the Military Policy of the United States.** By Maj-General F. V. Greene, U.S.V. 8vo. 15s. (John Murray). London, 1911.
- William Pitt and the Great War.** By J. Holland Rose. 8vo. 16s. Illustrated. (G. Bell & Sons, Ltd.) London, 1911.
- Records of the Dorset Yeomanry (Queen's Own).** By Capt. C. W. Thompson, 7th Dragoon Guards. 8vo. (Presented). (Dorset County Chronicle). Dorchester, 1894.
- My Experiences at Nan Shan and Port Arthur with the Fifth East Siberian Rifles.** By Lieut.-General N. A. Tretyakov. Translated by Lieut. A.C. Alford, R.A. Edited by Capt. F. N. Baker, R.A. 8vo. 12s. 6d. Illustrated. (Presented). (Hugh Rees, Ltd.) London, 1911.
- Notre Œuvre Coloniale.** By A. Messimy. Crown 8vo. 4s. 2d. (Emile Larose). Paris, 1910.
- Les Cyclistes Combattants.** By Commandant Mordacq. 8vo. 2s. 1d. (L. Fournier). Paris, 1910.
- Frontières Françaises.** By G. Voulquin. 3 vols. Crown 8vo. 3s. 3d. (Bibliothèque Larousse). Paris, n.d.
- Handbuch der Militärischen Sprengtechnik für Offiziere aller Waffen.** By Captain Bruno Zschokke. 8vo. 12s. 8d. (Veit & Comp.) Leipzig, 1911.
- The Armies of India.** Painted by Major A. C. Lovett, described by Major G. F. MacMunn, D.S.O. 8vo. 20s. Illustrated. (Adam & Charles Black.) London, 1911.
- A Hundred Years Conflict, being some records of the Services of six Generals of the Doyle Family, 1756-1856.** By Colonel Arthur Doyle. 8vo. 9s. Illustrated. (Presented). (Longmans, Green & Co.) London, 1911.
- With Napoleon at Waterloo, and other unpublished documents of the Waterloo and Peninsular Campaigns, also papers on Waterloo by the late Edward Bruce Low.** Edited with an introduction by MacKenzie MacBride. 8vo. 15s. Illustrated. (Francis Griffiths.) London, 1911.
- The First American Civil War—First Period, 1775-1778.** By the Revd. Henry Belcher. 2 vols. 8vo. 21s. Illustrated. (Presented.) (Macmillan & Co., Ltd.) London, 1911.
- Reminiscences of Lieut.-Genl. Staveley, C.B.** Crown 8vo. (Presented.) (Strangeways & Walden.) London, 1866.
- The Defence of Plevna, 1877.** By Captain F. W. von Herbert. Reissue. Crown 8vo. 1s. (Presented.) (Smith, Elder & Co.) London, 1911.
- The Diary of Mrs. John Graves Simcoe, wife of the first Lieutenant-Governor of the Province of Upper Canada, 1792-6.** With notes and a Biography by J. Ross Robertson. Illustrated. 8vo. (Presented.) (William Briggs.) Toronto, 1911.

THE JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION

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[Authors alone are responsible for the contents of their respective Papers.]

A PROPOSED RAILWAY FROM THE MEDITERRANEAN TO INDIA.

By C. E. D. BLACK, Esq.

On Wednesday, October 18th, 1911.

THE RIGHT HON. SIR HENRY MORTIMER DURAND, G.C.M.G.,
K.C.S.I., K.C.L.E., in the Chair.

SYNOPSIS OF LECTURE.

Introduction.—The Euphrates Valley Project.—Is an "All Red" Railway to India Possible?—General Alignment of the proposed railway.—The Trans-Arabian Section.—An Arabian Oasis Midway.—The Amir of Jebel Shommer and the Beduins.—Mesopotamia and the Persian Section.—Track of the Railway through Central Persia.—Arrival at the British Frontier of India.—Cost of Railway and Chief Sources of Revenue.—The Bagdad Railway.—Summary.—Opinion of Experts.

I am glad to be honoured with an invitation from the Royal United Service Institution to read a paper on the subject of the projected railway from the Mediterranean to India, *via* Northern Arabia and Southern Persia, as I believe much might be done at once towards furthering this British project, which many consider essential to the security of India.

Introduction.

It is unnecessary to trace the whole history of communications between India and the Mediterranean beyond pointing out that Great Britain has throughout displayed an extraordinary indifference to its importance. The Suez Canal, as we all know, was built not only with no assistance from England, but actually in the teeth of England's strong opposition encountered at the hands of Lord Palmerston and his Government. And yet England, as everybody knows, has profited far more than any other country from the existence of the Canal, and notwithstanding the recent growth of foreign navies and mercantile

marines, 62 per cent. of the aggregate tonnage passing through the Canal in 1910 was British.

In view of this acceleration of the sea transit, it is really astonishing that no serious effort has been made to improve land communication between India and Europe. Russia has built her trans-Siberian railway across the whole vast expanse of the Asiatic Continent, from the Urals to the Pacific Ocean, and had she, instead of us, been the mistress of India, we may certainly fairly infer that she would not have refrained from dealing with the far easier task of a railway to India.

The Euphrates Valley Project.

But Great Britain has for forty years shewn a curious disinclination even to consider such a project. In 1871-72 public opinion was indeed stirred to the point of an enquiry into the feasibility of constructing a line from the Mediterranean to the Persian Gulf. A Select Committee of the House of Commons was appointed under the Chairmanship of Sir G. Jenkinson to examine and report upon the whole subject of railway communication between the Mediterranean, the Black Sea, and the Persian Gulf. Two most interesting volumes of evidence were produced, containing the views of military officers, naval officers, merchants, railway engineers, civilians, and travellers familiar with those regions. The Report unanimously recommended the opening up of communications between the British and Turkish Governments for the construction of a railway from the Syrian coast to the Persian Gulf. Sir George Jenkinson and Musurus Pasha, the Turkish Ambassador, acting under the instructions of his Government, entered into full pourparlers and an agreement was arrived at between the two Powers. The chief features of this were the raising of an Ottoman loan, the interest of which was to be guaranteed by England, the provision of the land free for the railway by the Turkish Government, the free carriage of the English mails and the conveyance of British troops to and from India at the same rates as were to be paid for Turkish troops.

In spite of this agreement nothing came of the project. The fact was, that although improved communications with India were put in the forefront of the scheme, the Euphrates Valley Railway—as it was called—was not a complete project to run a line to the frontier of India. It stopped short half way, at the head of the Persian Gulf, and made no effort to cover the huge remaining gap of 1,500 miles or so to Karachi, at that time the westernmost port and rail-head of India. Although the promoters of the Euphrates Valley Railway made much of an estimated saving of a couple of days in the journey to India, they were content to stop at Basra or Koweit and to leave the eastward prolongation of their line to the gates of India to the chance developments of the future!

Great Britain and the Persian Gulf.

And this is exactly what the promoters of the Bagdad Railway are doing now, a pretty clear proof that their main object is to facilitate Germany's access to the Persian Gulf more than to improve India's communications with Europe or Egypt. But inasmuch as British Governments have openly declared more than once that England will maintain her supremacy *vi et armis* in the Persian Gulf, the Turko-German promoters of the Bagdad Railway are face to face with this difficulty: that they cannot prolong their line southward of Bagdad, so as to reach the coveted shores of the Persian Gulf without England's assent. England, judging from Sir Edward Grey's speeches, is not indisposed to grant her assent on certain conditions, and my firm conviction and contention are that a Turkish concession for the construction of any projected line from the North End of the Suez Canal at Port Said to Basra, Koweit, and the Persian frontier, at the head of the Persian Gulf, *via* Akaba, Maan and El Jauf ought to be the price payable to England for her assent.

Is an "All Red" Railway to India Possible?

The alignment of this projected railway from Egypt to Western India is an effort—partial though it may be—to solve the question of a direct British or "all red" railway route to India, as contrasted with a more roundabout route passing through regions further north, where German, Russian, or other foreign influences are in evidence. It is obvious that if British gold and British influence are being invoked on behalf of a railway to India, common sense and justice, if not self-preservation, demand that such a line should run practically under British control. How is this to be effected, when we bear in mind that the Continent of Europe, with the complications and jealousies of a whole world, intervenes between London and the British sphere in the East?

Fortunately the sea still lies open to us, and Gibraltar, Malta, Cyprus, and Egypt form convenient stepping stones *en route*. Starting from the last of these, *i.e.*, from Port Said, or, rather, from the opposite bank of the Suez Canal, there lies a feasible route eastward to Nushki, which is India's westernmost rail-head at present. This route is the most direct conceivable, as it follows very closely the "great arc" of the 30th parallel of north latitude, while it offers no insuperable topographical obstacles, the chief difficulties being the bridging of the Shat-el-Arab, Karun, and the marshy ground at the head of the Gulf and the ascent from the lowlands to the Persian plateau. With those exceptions, which pale into insignificance before such achievements as the bridging of the great Salt Lake in America or of the gigantic inundation of the Yellow River in China, there are no more than average natural features to be negotiated, considerably less than in the far longer and more difficult Siberian railway.

General Alignment of the Proposed Railway.

The railway would actually touch the sea at three points, Port Said, Akaba, and Koweit, and indirectly it would be in communication with the coast at two or three other points in Turkish and Persian territory, to say nothing of its proximity at its eastern terminus to large and important Indian towns. This fact is not only most helpful in the matter of landing stores and supplies during construction of the line, but it will enable several sections to be built simultaneously—a most important factor towards expediting the laying of the line. Very few, if any of the great railways of the world could boast of this advantage. And the same exceptional feature would prove invaluable in case of hostilities and trouble anywhere within touch of the line, as it would enable troops, ammunition, weapons, or stores to be landed at any one of these various points.

The Trans-Arabian Section.

There are some desert and quasi-desert tracts which would have to be traversed, but the sterile countries of the world have nowhere impeded railway construction, in fact, they have actually facilitated it. Witness the Soudan, Russian Trans-Caspia, Rajputana, West Australia, etc. It is important here to describe the topography, especially of the western half of the projected line, from the Mediterranean, across the north of Arabia to the head of the Persian Gulf, as this is the key of the whole situation. From the northern end of the Suez Canal, the line would run S.W. to Akaba at the head of the narrow gulf of the same name, which figures so conspicuously on maps of the Red Sea. So far, it would follow generally the Haj or pilgrim road to Mecca. It might be feasible to run a short branch line to Akaba, which lies on the coast at a much lower level, of course, than the great Arabian plateau. The main line would thus not have to descend and ascend so much steep ground before gaining the plateau. But from thence eastward, to a point equidistant from Basra and Koweit, whither a branch would diverge, the region consists of nothing more formidable than a stony, not sandy, country, averaging throughout about 2,000 feet above sea level (see Charles Huber's map with its numerous heights) and studded here and there with low hills. It is most interesting to note that Mr. Carruthers, one of the most recent travellers in these parts, has within the last eighteen months stated that he came across wells and ruined caravanserais, proving clearly to his mind that the very alignment I am advocating for the railway, is identical with an old caravan route which centuries ago used to be followed by the traders from Maan to the Persian Gulf. It is indeed no new thing to find the highways of antiquity reviving and materialising into the railways of the present day, but it is very encouraging to note that the feasibility of

this route is endorsed by the wisdom and experience of past ages. Indeed, Mr. Charles M. Doughty, another well-known Arabian traveller, has written to me, highly approving my proposals. These are his words:—"A railway to India, making us less dependent on the Suez Canal, is truly a patriotic enterprise, which by way of northern Arabia I have often thought upon, and which I believe, if money could be found for a political investment, to be quite feasible. The entry mastered, the rest is a high plateau without serious difficulty, and everywhere there is water within reasonable distance."

Arabian Oases Midway.

Mid-way across Arabia there is a most important oasis, forming an invaluable objective point, half-way house, and resting place for the future railway passengers. It is called El Jauf or Djowf and has been visited and reported on by W. G. Palgrave, Mr. Wilfrid and Lady Anne Blunt, Charles Huber, Baron von Nolde, the Revd. A. Forder, and Captain Butler. All these passed through and stayed at El Jauf. The first-named (Palgrave) speaks with some enthusiasm of its appearance, resources, vegetation and fruit, and the liberality and hospitality of the inhabitants. The number of these, according to Mr. Forder, a recent traveller, is 40,000, and a few miles north-east is another populous oasis called Sekaka. Both of these oases are of great antiquity, and there is evidence that they were more extensive in ancient times than at present. They are a standing refutation of the popular illusion that northern Arabia is sheer desert *et præterea nihil*. The drainage, judging from the course of the wadys, is north-easterly towards the head of the Gulf. Between El Jauf and Basra there is no regular survey that I know of. I have not come across a record of any European traveller who has ever passed this way, but I am glad to say I possess a native itinerary, showing halting stations and wells, which was furnished to me some years ago by our Resident in the Persian Gulf. It corroborates the opinion that beyond scarcity of water, which, of course, might be remedied by proper boring appliances, there is no more difficulty in running a railway in N.E. Arabia than has been encountered by the Turkish engineers in constructing the Hejaz railway in Western Arabia. In fact, Mr. Carruthers, the Arabian explorer, has declared that my proposed railway would be easier to construct than the Hejaz railway to the Holy Cities of Islam was, a few years ago.

A glance at the map will enable anyone to realize that the trans-Arabian section is the golden key of the situation we are considering. The trans-Persian line to the Indian frontier is of course essential, and in point of bridging, hill-climbing, and tunnelling, will be found more difficult. But in that country we shall be operating in a region where we have treaty-rights.

The trans-Arabian route is in the open market, so to speak, and can be secured by anyone if proper measures be promptly taken with (1) the Turkish Government (who occupy somewhat, but not exactly, the position of the Suzerain Power) (2) the Amir of Jebel Shommer, the actual ruler of this part of independent Arabia, and (3) the various groups of independent Beduin tribes between the Gulf of Akaba and Basra.

Turkey might probably be squared at the present moment if the concession for the trans-Arabian line were demanded as the price of British consent to the prolongation of the Bagdad Railway to the Gulf.

The Amir of Jebel Shommer and the Beduins.

The permission of the Beduin Amir and good-will of the tribes en route could be obtained by personal negotiations by an emissary from London, who might be accompanied by an engineer and mineralogist or geologist. The envoy could conclude agreements, covenanting that for certain subsidies, payable from a stipulated date, the land necessary for the railway with a mile or so on either hand with all mineral and other rights within this zone would be leased or ceded to the company constructing the line. The subsidies would be payable annually or quarterly on the distinct understanding that each tribe was responsible for the security of the section of the line nearest to its usual habitat. Any injury to the line or its employees or robbery committed within the tribal sphere would stop that particular subsidy. I believe this plan is pursued in the case of the telegraph line in Palestine, and is found to work well. The subsidies or allowances would, of course, be settled with the Construction Company after all the preliminary arrangements had been concluded, but their amount would be ascertained by the preliminary survey expedition.

Mesopotamia and the Persian Section.

I have devoted a good deal of space towards considering the trans-Arabian section, *because it presses*. But I must explain that the Persian section has been studied with equal care. After the survey expeditions, working from Cairo and Port Said, have covered the whole Arabian and Turkish route *via* Akabah, Maan, across the Hejaz railway (with which an important junction would be effected) and *via* El Jauf to Basra, Mahommerah and the Persian frontier, it would be necessary for them to ascend to the Persian plateau. As already explained, this will necessitate crossing the Shat-el-Arab and Karun by swing-bridges and traversing the surrounding lowlands, which will be costly, though not excessively so. Here great assistance will be derived from the surveys and other operations of Sir William Willcocks, who has been carrying out a gigantic and

expensive scheme of reorganization of the ancient irrigation works of Mesopotamia (once the granary of the world) under the orders of the Turkish Government. The Bagdad Railway is sure to act as a useful means of conveyance for the grain and other produce of Mesopotamia to Asia Minor and the intermediate Turkish provinces. But Sir William Willcocks has already said that it will be necessary to have a railway running direct to the Syrian coast as well, to avoid the long roundabout sea-voyage down the Persian Gulf and up the Red Sea and through the Suez Canal into the waters of the Mediterranean. Our railway, though directed to the Egyptian rather than the Syrian coast, will fulfil this requirement, and thus prove most useful to Turkey as well as to England and India. Where the line enters on Persian territory it would pass within a few hours' journey of the principal works of the Anglo-Persian Oil Company, to whose undertaking the railway might prove a valuable feeder.

Track of the Railway through Central Persia.

Shortly, the Persian section would pass close to Yezd, Shiraz and Kerman, the three chief commercial places of central Persia. For years, I may mention, our Consuls in Persia have been lamenting the backward condition of trade, the absence of roads, and the various difficulties interposed in the way of commerce. A few years ago a special commercial mission was despatched with the approval of Lord Curzon, then Viceroy, from India to Southern Persia, principally with the object of developing the trade with India. A very valuable report, choke-full of practical information was produced, but very little, if anything, was done to carry out the numerous recommendations therein, chiefly because of the disturbed conditions of Southern Persia especially. England has intimated to Persia in unmistakably firm language, that unless security of life and property are absolutely restored, England herself will ensure that, with the aid of Indian troops, and this step is now being taken. I have read all recent works on Persia and have had valuable letters from Major Ducat and other Consular Offices there, and there can be no doubt whatever of the enormous incentive to, and development of local trade that a Persian railway, running from the Gulf to the Indo-Seistan frontier would bring about. Amongst other things it would lead to the immediate construction of a road and telegraph line from Bunder Abbas, the chief southern port, to Kerman. I happen to know a good deal about this, as three years ago a well-known city company asked me to write a full report with estimates of cost on this scheme, and had it not been for the ensuing Persian troubles, the road and telegraph would have been partly constructed, and, indeed, nearly completed by now.

Arrival at the British Frontier of India.

Between Kerman and the British frontier at Seistan—in fact I may say as regards Persia generally—I have received most valuable information and help from Mr. H. R. Sykes, the well-known Persian traveller. I need not reproduce all he says in detail here, but, shortly, it consists of evidence entirely favourable to the railway, as to alignment, topography, physical difficulties, labour and water. Transport, however, is costly, at present; as may be inferred from what I have said above.

We have now arrived at the British frontier, and from thence to Nushki, the present Indian railhead towards the west, it is quite plain sailing, as a trade route, with post-stations at intervals, has been laid down by the Indian Government for a distance of over 400 miles. I take it, however, they would probably wish to reserve to themselves and their own P.W. Department the actual construction of the railway along this stretch in accordance with the general trend of Indian railway policy of late years.

Necessity of Survey from End to End.

The first step towards the accomplishment of the railway is a survey of the route from end to end. It need not, at this stage, be an elaborate survey; it should be more of a reconnaissance survey, but it is essential that some one qualified person—two would be better—should carry out such a survey, starting from Port Said, crossing the Sinai Peninsula to Akaba, thence working up the slopes of the plateau towards Maan, and thence proceeding eastward to El Jauf. From the latter point to Basra, as I have already mentioned, the region is very little known. I believe that it would be possible to obtain useful surveys from the engineers of the Hejaz railway of the western portion of the route, and from Sir William Willcocks in respect of the eastern tracks abutting on Basra. As far as concerns the Turkish territory round the Gulf of Akaba, and as far eastward as the Hejaz railway, this has been leased by the Turkish Government to an influential British syndicate who are most friendly to the project we are considering.

It would be desirable to ascertain from the Amir at El Jauf, his views, frankly, as to the making of a railway through that town, and what compensation, subsidy, or share of the profits he would require. Also his exact relations with the various tribes en route. This information is essential to the undertaking, for El Jauf, as I have said before, is the key of the project. My general idea is for the Beduins to undertake the policing of the line, and for the Amir at El Jauf to do the same as regards the territory for which he is responsible, the whole of the 750 miles or so from Akaba to Basra being leased to the Company by the Turkish Government, whose suzerainty, nominal though it be in the interior, must be respected.

Cost of Railway and Chief Sources of Revenue.

A very important question is, Can such a railway pay? A line of 2,000 miles in length, costing, so far as one can judge from railways in adjacent regions, about £6,000 a mile, would mean a capital expenditure of some £12,000,000, and adding £3,000,000 for rolling stock, one gets a total of fifteen million sterling, the interest on which, at $3\frac{1}{2}$ per cent, plus $\frac{1}{2}$ per cent. for sinking fund, would amount to £600,000 per annum. Would the railway earn this in addition to its working expenses? This is, of course, difficult to predict with confidence. The Indian railways, taken collectively, pay 4.81 per cent., and they exploit regions of a very diverse character, varying from sterile tracts, such as those of Rajputana, to well-watered plains teeming with population and culture like those of Bengal. It must be borne in mind, however, that the principal advantages of a railway such as we are considering, do not lie in its purely commercial earnings derived from the productiveness of the country traversed. An end-to-end trunk railway, designed to shorten communications between India and the Mother Country cannot be judged by the considerations and arguments applicable to a line or branch of two or three hundred miles, designed to exploit a limited area, or a remote part of some larger colony. It will be apparent from what has been already said that the through traffic which may fairly be anticipated is of a very extensive and exceptional character. Civil servants on furlough, military officers, and British soldiers, of whom there are 34,000 annually passing backwards and forwards, merchants and others interested in the businesses of India and the East, might be reckoned on as only too glad, in the majority of cases, to avail themselves of a means of transit which will save them six entire days, or twelve on the return journey, as the case may be. All these considerations point to a very large passenger traffic. In the case of need arising for the rapid conveyance of troops eastward or westward, the saving of time can hardly be measured by money. Then the pilgrim traffic would be very large, when we bear in mind that there are over 60 millions of Mahommedans in India alone, a large proportion of whom would be only too glad to achieve the great object of their lives and visit the holy places of Islam. Lastly we must take due note of the acceleration of the mails, for it is not conceivable that the public will allow these to travel by any but the speediest means of conveyance, and a saving of six days means much from a business point of view.

The Bagdad Railway.

Before taking leave of the subject, it is difficult to avoid saying a few words as to the Bagdad Railway. Whether the Bagdad Railway will ever materialize or not, it is impossible to predict: its main professed object, which is to open up and

develop an enormous expanse of the Turkish Empire, is one with which every friend of civilization must fully sympathize; at the same time it cannot be said to have the same high aims—administrative, political, commercial and defensive—as the Egypto-Indian line. I would even go further, and say that the railway we are specially considering, if regarded only as a link between two of the chief countries under British rule, is an actual Imperial necessity. Still, the construction of a British railway to the East, which would eventually meet the Bagdad line, say, at Basra, might conceivably be viewed in some respects as a rival undertaking.

In reply, one cannot help saying this—that if the aims of the Bagdad Railway are purely pacific and economic (and ample assurances on this head have been often forthcoming), it is impossible to contend that the two undertakings are in any sense rivals, still less inimical, one to another. They may possibly touch at some point in or near Mesopotamia, but from that point, westward they diverge in utterly different directions, the Bagdad Railway north-west towards Asia Minor, the Egypto-Arabian line due west towards the Red Sea and Northern Egypt. The former would exploit the Euphrates Valley; the latter, Arabia, Egypt and Sinai, while the huge Syrian desert would intervene between the two, and preclude any overlapping of interests. The Egypto-Indian railway could not be viewed as an unfriendly move against any Power except on the absurd and utterly untenable ground that what tends to strengthen Great Britain's tenure of India is a menace to others.

Summary.

To sum up. This railway is desirable for various important reasons.

1. It will shorten the journey to India by six whole days, thus reducing the time of transit from England to India to 8 days only, in lieu of 14 or 15.
2. It will form a valuable alternative route to India and the East generally, in case the Suez Canal were blocked, either through accident or design.
3. For the rapid conveyance of troops from India to the Mediterranean or *vice versa* the line would be invaluable, and of vital service to the Empire.
4. It would also be highly useful for the expeditious conveyance of officials, passengers, mails and merchandise to and from India and countries beyond.
5. It would fit in with and prove of great service to the Turkish projects for the irrigation and re-vivification of Mesopotamia.
6. It would supply an important means of access for Mahommadan pilgrims, whether from India or elsewhere, to the holy places of Islam, through junction with the Hejaz railway at Maan.

7. It is the only line of railway from Europe or the Mediterranean to India which would be under British control from end to end.

Having closely studied this question for over twenty years and consulted many of the first naval and military authorities, railway engineers, travellers, diplomatists, and writers conversant with the subject, I am more than ever convinced of the practicability and the desirableness of the undertaking. Every fresh piece of information that has come to my hand has only confirmed my opinion of the soundness of the project. When a survey of the route from end to end is once carried out we shall be in a strong position to ask the Government to support what I believe to be the greatest Imperial necessity of the present day.

I annex the opinions of some expert authorities.

OPINIONS OF EXPERTS.

Lieut.-General Sir EDWIN COLLEN, G.C.I.E., C.B.

"I have been much struck with the manner in which Mr. Black has laid before us the views and opinions he has formed after long study of this question. . . . It becomes us to discuss the merits and demerits of the project, and, if it is found a feasible one, we as a country should put our heart and soul into it."

Dr. COTTERELL TUPP, LL.D. :—

"Certainly it would be a very good thing for India if we could secure the making of this railway. It is the most direct route and the one most free from foreign interference. The investment would be a good one politically."

Mr. H. R. SYKES (Persian traveller) :—

"I agree with the lecturer as to the great importance of securing British control of a line to India. Now that the subject has been raised it ought not to be allowed to drop. The matter should be investigated, and its significance should be brought home to the British public."

Mr. H. F. B. LYNCH, M.P. :—

"We ought to press for detailed and prompt examination of the scheme by experts. I can only express the hope that the matter will be thoroughly threshed out very soon, for, if this is not done, the ground will be cut from under our feet by the construction of the Bagdad railway."

Colonel C. E. YATE, C.S.I., C.M.G., M.P. :—

"If the scheme is practicable it is to be heartily welcomed. Nothing could be better for us than to have a line in these regions under our sole control.

"I hope it (the project) may be taken up and examined in real earnest."

Sir F. FRYER, K.C.S.I. :—

"The scheme seems in every way a desirable one. I have had some experience of pioneer lines and I have noticed that when the facility is given there generally springs up a considerable amount of local traffic. I will ask you to accord the lecturer a hearty vote of thanks, and to give him our best wishes for the line he has advocated being made the subject of prompt enquiry."

Mr. D. CARRUTHERS (recent Arabian explorer and resident in the country :—

"For a railway from Egypt to the Persian Gulf no greater hindrances exist than those already overcome by the builders of the Hejaz railway. As a whole the type of country would be easier than that crossed by the Mecca line, and the physical difficulties less severe.

"The objection put forward that the Beduin would prove hostile to the building of the railway is, I think, unfounded. If the Suez-Basra line was built, the Beduin who inhabit the region through which the line would pass need not be interfered with in any such way. They would not lose their independence through the building of the railway. The Beduin are not unreasoning barbarians, but are quick to recognise a powerful and just Government."

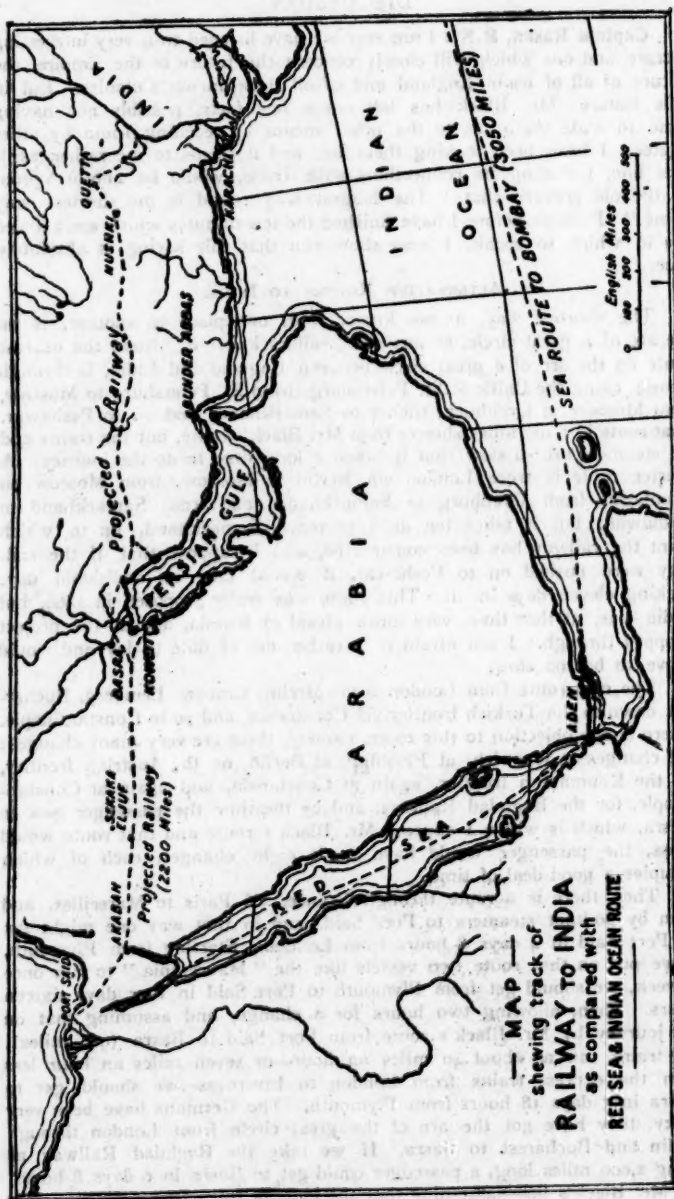
Lieut.-General Sir EDWIN COLLEN, G.C.I.E., C.B. :—

"I have no doubt there would be a large pilgrim and other native traffic, while the military and strategic advantages are unquestionable. At one time, one difficulty appeared to me to be the safety of the line. But I am assured by men who know the Arab tribes that there would be no difficulty at all if we made up our minds to subsidise them, just as we do on the N.W. frontier of India."

Mr. G. H. LIST (formerly Chief Engineer, Indian State Railways) :—

"The proposed Indo-Egyptian railway is certainly the most direct conceivable means of reaching India from the West, and the fact that it would traverse some sterile tracts affords no sort of obstacle, when we consider the railways that have so successfully been built in the Soudan, India, West Australia, and elsewhere. Furthermore, the all-important fact that such a line will shorten the journey to India by five or six days is incontestable evidence of its value from an Imperial and commercial point of view."

Among the organs of the Press the *Daily Mail*, *Daily Telegraph*, *Morning Post*, *Pioneer* (Allahabad), *The Civil and Military Gazette* (Lahore), *Englishman* and *Times of India* have had strongly eulogistic comments on the project.



DISCUSSION.

Captain Rason, R.N.: I am sure we have listened to a very interesting lecture and one which will closely concern the future of the Empire, the future of all of us in England and of all those in our Colonies. But in this lecture Mr. Black has left out a few facts, possibly not having time to state them, as to the other means of reaching India by other routes. I have been looking them up, and it seems to me rather as if this line, including its connections with India, would be another proof of the old proverb that "The longest way round is the shortest way home." Perhaps before I have finished the ten minutes which are allowed me in which to speak, I may show you that this saying is absolutely true.

ALTERNATIVE ROUTES TO INDIA.

The shortest way, as we know, from one place to another, is on the arc of a great circle, at any rate, sailors know it. Now, the nearest route on the arc of a great circle between England and India, is through Russia, along the Baltic to St. Petersburg, from St. Petersburg to Moscow, from Moscow to Orenburg, thence to Samarkhand, and on to Peshawar. That route is 1,200 miles shorter than Mr. Black's route, but the trains and the steamers are so slow that it takes a long time to do the journey. A shorter route is from London via Berlin to Moscow, from Moscow to Orenburg, from Orenburg to Samarkhand, and from Samarkhand to Peshawar; but it takes ten days to reach Samarkhand, up to which point the railway has been constructed, and I suppose that, if the railway were pushed on to Peshawar, it would take an additional day, making eleven days in all. This route was really proposed in 1869, but India was, at that time, very much afraid of Russia, and so the project dropped through. I am afraid it is rather out of date to-day and would prove to be too slow.

The next route from London is via Berlin, Cracow, Lemberg, Bucharest, down to the Turkish frontier via Constanza, and so to Constantinople. There is one objection to this route, namely, there are very many changes; one changes at Harwich, at Flushing, at Berlin, on the Austrian frontier, on the Roumanian frontier, again at Constanza, and again at Constantinople, for the Baghdad Railway, and by the time the passenger gets to Basra, which is where I suppose Mr. Black's route and that route would cross, the passenger would have made eight changes, each of which occupies a good deal of time.

Then there is a route through France, via Paris to Marseilles, and then by 20-knot steamers to Port Said, and in that way one might get to Port Said in 4 days 8 hours from London. Starting from Plymouth, if we put on that route two vessels like the "Mauretania" to run once a week, we should get from Plymouth to Port Said in four days sixteen hours. Then, allowing two hours for a change, and assuming that on the journey by Mr. Black's route from Port Said to Basra (900 miles), the trains ran at about 40 miles an hour—or seven miles an hour less than the express trains from London to Inverness—we should get to Basra in 5 days 18 hours from Plymouth. The Germans have been very lucky, they have got the arc of the great circle from London through Berlin and Bucharest to Basra. If we take the Baghdad Railway as being 2,000 miles long, a passenger could get to Basra in 6 days 8 hours. By Mr. Black's line—assuming that the journey from Plymouth was done in the "Mauretania" or "Lusitania," and counting 40 miles an hour

on the railway—we would be able to get to Basra 12 hours before the passengers by the other route; that is to say, the longest way round would prove to be the shortest way home.

Of course, the route by Russia is out of it. Mr. Black has already told us he is going to do it by his route in 8 days. We must remember that ten years ago we had the blue riband of the Atlantic taken from us, much to the dislike of the British people, and that a subsidy was given to the Cunard line to build two steamers, the "Mauretania" and the "Lusitania," and in that way we got the blue riband back, and we have it now. The other day I saw in the paper that the "Mauretania" left New York 24 hours after one of the fastest of the German steamers. The German steamer went to Cherbourg and landed her passengers for Paris. The "Mauretania" landed her passengers at Fishguard and they had to travel by Reading and Dover to Paris, but although they had started 24 hours behind the passengers by the German steamer, they reached Paris only six hours behind. If we can do that in the Atlantic I think we might do the same in the Mediterranean. At any rate, we shall probably see a good deal of emulation in speed, when the Baghdad Railway is completed, and Mr. Black's railway is made, to see who is going to get there first. If Mr. Black can get the British public to take up his railway in the same way that they took up the question of the "blue riband of the Atlantic," there is no doubt we shall have practical proof in the time to come that the longest way round is proved to be the shortest way home.

Lieut.-Colonel A. C. Yate: I have felt myself the difficulty of having to advocate a possible railway line between Europe and India; for only last February I studied to the best of my ability and laid before the Central Asian Society the possibilities of the Trans-Persian Railway. I do not know how many of us, when we take up a thing keenly, fully realise how very apt we are to look at things "couleur de rose," and I am strongly impressed with the fact that Mr. Black occasionally looks at his railway very much as it is represented on the map on the wall, "couleur de rose." He passes over in a very few words the great engineering difficulties in the valley of the Tigris and Euphrates, the difficulties of both crossing that valley and of getting up to the Persian Plateau. Indeed, I was rather struck by the fact that in indicating the line he would take he went up to Yezd, came down to Shiraz, and turned up again to Kerman, an extremely zigzag route which, I am perfectly certain, no Egypto-Indian railway would follow.

THE QUESTION OF THE INDIAN RELIEFS.

Then, when he talks of carrying 34,000 British soldiers regularly (I presume, the annual reliefs) between India and the Mediterranean, I am convinced, in my own opinion, that the British and Indian Governments will not want to carry soldiers by rail, that method being more expensive than conveyance by water. If you take the line from the Indus Valley by land to Port Said, and the line from Bombay up the Red Sea to the same point, the difference in distance is not great, and there is no change from rail to ship, or vice versa. It is true that they move the troops in the cold weather, but I imagine the British Tommy would get infinitely more fatigued with the long journey from the Indus Valley to the Mediterranean by train than he would by a steamer journey up the Red Sea. These are little things, I confess, in what is a great policy.

Had not the gentleman who has just spoken anticipated me, I had thought of saying more in connection with alternative routes. He has already extremely well sketched two of them, the Russian route which goes through Orenburg and on to the Northern Frontier of Afghanistan, ready, on the Amir's permission being given, to move on into India, and the Baghdad Railway. Then there is the Trans-Persian, which is at present comparatively in the air, and I think we may as well leave it there, time being short.

WOULD THE RAILWAY PAY?

As far as my knowledge goes, the line of route from Port Said to the N.W. end of the Persian Gulf traverses territory from which little can be expected in the way of commerce; but it connects lands with a great past and, probably, a great future. The ancient monarchies of the Tigris and Euphrates Valleys and Persia had close communication with Egypt; so much so that Persia under Cambyses conquered Egypt and the Cyrenaica. If that close communication is restored, if Mesopotamia becomes a very prosperous country, if Egypt under our rule, and Northern Africa under the control of various European Powers, attain a degree of prosperity which they have not for centuries, if ever, known, we may surely argue from that that commercial relations will be reopened between Egypt and North Africa on the one hand, and Mesopotamia and Persia on the other. That I think is a solid argument in favour of Mr. Black's contention that a railway across Northern Arabia might be possible, and might pay. I am more convinced of that than I am of the necessity of the railway for the purposes of British policy; for I look upon it as an extremely difficult thing for the British Government so to settle matters at this juncture with the Turkish Government and with the Arab tribes, that a railway can be securely and satisfactorily constructed from Port Said to Basra by British capital, and maintained there under British control. Mr. Black has attempted an analogy between what Russia does in her own Siberian territory, and what we might possibly do in other people's territory, an absolutely fallacious analogy. I am certain that an Arabo-Turkish concession for a railway from the Syrian coast to the Shat-al-arab would bristle with incalculable difficulties.

It remains for me to say a few words about the section of Mr. Black's proposed line which connects Mesopotamia with the Indian frontier. I doubt the utility of this railway to the Anglo-Persian Oil Company. That Company has, I understand, already laid its pipe-line towards the head of the Persian Gulf. Oil finds its way into tank-ships, and so to its destination, less expensively than into and by tank-trucks. Anglo-Persian Oil railed will not compete with Baku oil shipped either in the Mediterranean or anywhere else.

THE SITUATION OF THE TERMINUS.

Coming to the question of making Nushki the terminus, that is a point which I had seriously to consider in regard to my Trans-Persian Railway. Not only I, but a good many other specialists, thought that either Karachi or some point between Karachi and Sukkur should be the terminus. I noticed that when Lord Hardinge went down to Karachi a few months ago, the Karachi Chamber of Commerce particularly drew his attention to the claim Karachi had to be the terminus of such a

railway, and his Excellency's reply was that the Government of India was giving the whole question their very serious consideration. Now, when the Government of India gives a thing very serious consideration, I think we may conclude there are strong arguments in its favour. I do not regard Nushki as at all a good terminus. If you go to Nushki, you must go up to Quetta, and again down to Sibi—5,000 feet up and down for nothing. Or, you must cross the mountains from Nushki to the Gomal Pass and so reach the plains of the Punjab. There are two bridges over the Indus, one at Sukkur and the other at Kotri, and both these bridges connect Baluchistan and the West with the centre of India by a number of important railways. If possible, we should, I think, seek for the terminus of our railway, be it Trans-Persian, or Egypto-Indian, at, or near Kotri, with a branch, perhaps, from Panjgur or Las Bela to Karachi. There is not a shadow of doubt in my own mind that the colours in which Mr. Black has sketched the difficulties, or the absence of difficulties, in constructing a line across Persia and Baluchistan are unwarrantably faint. The difficulties are serious. Still, for the reasons I have mentioned, viz., to facilitate the relations between Egypt and Mesopotamia, to which peace and prosperity will give rise, I think that amongst those railways of the future which will undoubtedly connect West with East—and the time will come when they will not only reach India, but will stretch right across to the Pacific—it is possible that Mr. Black's railway, or one very like it, will be included. The passenger from the Cape will, doubtless, in course of time reach without break of gauge Vladivostok on the Pacific or Yakutsk on the Lena.

Sir J. D. Rees, K.C.I.E.: I should like to ask, as Mr. Black is going to reply upon this debate, whether, supposing the Baghdad Railway is laid down as far as Baghdad, he regards it as a serious proposition that there should be another line short circuiting it from the Egyptian Delta to the head of the Persian Gulf. Already we know that the concession for the Baghdad Railway had been amended so as to provide for a branch to Alexandretta, affording railway communication from Alexandretta to the head of the Gulf. There you have a project which has already reached a considerable stage towards fruition.

THE COMMERCIAL PROSPECTS OF THE PROPOSED RAILWAY.

How does Mr. Black regard it possible as a commercial proposition that there should be another line going straight across this desert part of Arabia? The project in this aspect seems to have been conceived without any regard to existing facts. If the railway is to be regarded solely as a strategical line it would be sufficient to say that under no circumstances would British troops require that method of approach to India. The sea, of course, is far safer, and not so very much longer. In point of fact, except for the mails, I do not myself see in what way a railway approach to India would be of any benefit to this country or to India itself. It is well known that competition has only to come into play to accelerate very much the time in which the P. & O. can take mails to India, and that the contract time admits of great acceleration. Colonel Yate has spoken of Mesopotamia and its future prospects. It was thought likely that Mesopotamia would again become a great granary, but I believe that prospect is already impaired if not destroyed. The great irrigation engineer who had the matter in hand, I believe, has left, and certainly the conditions of the Turkish Empire do not seem

likely, within any given period, to admit of any progress in the arts of peace and irrigation. I cannot see, therefore, what commercial prospects there are of a satisfactory character even for a prolongation of the Baghdad Railway from Baghdad to the Gulf; and how there could be any prospects for this other, and presumably competing line, commercially, I must say, I altogether fail to understand.

THE EXTENSION OF THE RAILWAY THROUGH PERSIA.

As regards the line from the head of the Persian Gulf towards the Indus, that is common to all schemes except the one that is to go through the North to Afghanistan. No doubt it would be extremely advantageous to this country that some railway should be projected that way, even if it never got beyond the state of a project, because under the Anglo-Russian Convention the greater part of its course would run through neutral territory, and it is extremely desirable that this territory should be occupied with a scheme or project that will keep out other people. Unless we have some scheme it is not at all improbable that somebody else will come in with one and run right athwart the trade lines we have developed, and ought to continue to develop and use. Had the Anglo-Russian Convention really been an Anglo-Persian Convention and made with reference to our position in that country only, it would have been extremely unfair that this region should have been neutral. As it is neutral, and as I believe, under the existing arrangements, both Powers, Russia and England, are pledged not to compete with one another in neutral ground, it is exceedingly desirable on every score that a survey or a project or something of a diplomatic, if not of an engineering character, should be set on foot, that we may hold the field for this portion of the line. I venture to make these few remarks not to discourage Mr. Black, because I think it is a very good thing that he does, as Colonel Yate said, see things "*couleur de rose*," and not "*en noir*"—I congratulate him on that—but I have felt it necessary to make these few remarks because I cannot quite see the practicability of his scheme in view of the considerations I have mentioned.

Captain Chas. Slack said he thought it was the opinion of the public generally that we ought to have a more direct line of communication with India.

The quickest overland route to the East at present was by the Orient Express, *viâ* Constantinople. That route continued from Constantinople through Asia Minor, and the line was now completed to Bulgurlu; when it was extended to Damascus and Jerusalem it would open up a very important route for visitors to the East to consider. Then it might go on and join with Mr. Black's suggested route across Arabia. When considering the line from Port Said he thought it might just as well have been carried further north, so as to avoid the tribal considerations. When the line reached Koweit he did not see why it should not run through Basra and along the coast to Bunder Abbas.

There had been very many lines put forward. He did not think relying on military or political considerations was of such great importance as compared with what the travelling public of the future might consider the best route to India. Military officers would probably use the line coming through Constantinople. Although they might lose a little in the zig-zag lines of railway through Asia Minor, they would see the countries through which they passed. Travelers were always anxious to see new countries.

He hoped that Mr. Black might at some future time favour them with another paper on the subject, giving them his further and extended views.

Mr. C. E. D. Black, in reply, said: Colonel Yate made some remarks about the conveyance of troops. I did not mean to imply in my paper that it was part of the scheme that the railway should be available for the conveyance of all troops travelling between India and England. I only meant to remark that there is a very large exchange in connection with the ordinary reliefs between the two countries, and that, in case of necessity, troops might be conveyed with great rapidity. I daresay it is perfectly true that "Tommy" would prefer to go by sea. For nine years that method might possibly be preferred, but then some sudden emergency might arise which would make it extremely necessary for troops to be conveyed more quickly, and in that case we should derive such benefit from the rapid conveyance of troops in the tenth year as would amply compensate for the railway having been a non-productive line—as far as troops were concerned—for the preceding nine years.

THE POSITION OF THE TERMINUS.

One speaker has said that Karachi would make a better terminus than Nushki. That is a point of detail. I do not pin my faith on Nushki at all. I think Karachi under certain circumstances might make a very admirable terminus. Before this railway reaches the Indian frontier a proper survey would establish beyond doubt which was the most convenient terminus to be fixed upon. After all there is not such an enormous range of country between Karachi and Nushki, and if Karachi fulfilled the purpose better it could quite well be chosen.

THE BAGHDAD RAILWAY.

Sir John Rees said a good deal about the Baghdad Railway, but I could not follow him very clearly in his arguments. I cannot understand why this railway should interfere with the Baghdad Railway, or why it should be rendered unnecessary because of the existence of the Baghdad Railway. The Baghdad Railway is not completed; it only goes as far as a point in the N.E. angle of the Mediterranean Sea; and we can hardly look upon it as a serious proposition until it matures more than it has done. In any case my railway would exploit a very different region, and is also an endeavour to unite Egypt with India, and that, of course, is quite outside the function of any enterprise like the Baghdad Railway. There are a great many points of detail which speakers have insisted upon which, of course, might be open to discussion; but as far as the main proposition is concerned, I am content, speaking for myself, that the meeting is not inimical to it.

The Chairman: I am sure we are all very much obliged to Mr. Black for his lecture.

It has been said that he has viewed his scheme and set it before us "couleur de rose"; but after all that is the foundation of the enthusiasm which makes things work. Looking at matters "en noir" means depression and inaction.

As to the merits of the scheme, my own feeling is that geographical difficulties, such as those mentioned by Colonel Yate, are of comparatively small importance. Geographical difficulties are being overcome all over the world, by Russia and by us and by everybody else. In the future the overcoming of all natural obstacles will be accelerated.

It seems to me that every project of this kind has to be looked at from two points of view, one from the strategical and the other the commercial. I do not feel that I am able to give any opinion worth having as to whether this project is a sound one from the commercial point of view. That requires a great deal more consideration before a confident opinion can be given one way or the other. But I should like to say one word, after what we have heard from Sir John Rees, Colonel Yate, and others, with regard to the strategical aspect of the proposed railway. I daresay I may be quite wrong, but my own feeling is that as a strategical project it is a very doubtful one. The railway would not be an all-red route. Whatever influence we may have over it, however much we may have to do with working it, the line will lie, as Colonel Yate pointed out, through territories which do not belong to us; and it seems to me that the idea of using, as a strategical route, a line of railway which runs through foreign territory for hundreds or thousands of miles, is unsound. It appears to me that the only real foundation for a strategical route is armed power; and that the only sphere in which we can reasonably hope to have preponderating armed power is the sea. That is the sound strategical line to India—our old line of the sea by which we took India.

Before I sit down I wish to ask you all to join in a hearty vote of thanks to Mr. Black, whose lecture has been very interesting and has shown great labour and care.



GERMAN AND BRITISH NAVAL ARMAMENTS AS A PRODUCT OF HISTORICAL DEVELOP- MENT AND OF MARITIME STRATEGY.

By

VICE-ADMIRAL BARON V. MALTZAHN.

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by permission.¹

THE question of an understanding between Germany and Great Britain in regard to naval armaments refuses to disappear from the realms of public discussion, although it is to be presumed the Governments of both countries have finally given up the attempt to discover a practical basis for its consideration. In the articles which, nevertheless, continue to appear in the political press, arguments of the most varied kind are introduced into the discussion; arguments such as arise from the divergent views obtaining in the two countries, and from a confusion of the issues with questions of party and of the day. That this does not conduce to a solution, that many are, in fact, only concerned in sowing discord and making mischief under the cloak of explanation—or make use of this much debated question for objects with which it is in no way concerned—is easily recognised by every impartial observer. These constantly recurring attempts, nevertheless, allow international public opinion no rest; for owing to the close connection existing between the economic and political relations, which encompass the world of to-day, there is scarcely a single State which is not concerned in such a question. It may, therefore, appear worth while to put the policy of the moment on one side, and to consider the historical development of this problem, instead of its present condition, and to attempt to resolve it into its prime factors.

¹ Vice-Admiral Freiherr von Maltzahn (retired), to whose courtesy we are indebted for leave to publish this translation, was formerly professor of naval strategy, and Director of the Imperial Naval College at Kiel, and is well known as a writer on naval subjects. In granting leave for this article to appear in the *JOURNAL*, Vice-Admiral von Maltzahn has expressed a hope that the publication, at the present time, of a dispassionate statement on the question of naval armaments may have a beneficial effect.

About the middle of last century Europe was on the eve of important changes in the lives of States, in trade, in industry, and in commerce. To the mighty turmoil of the Napoleonic Wars there had succeeded a period of political quietude on the Continent, and of economic stagnation due to exhaustion. But it was otherwise in Great Britain. Under the protection of a fleet which had been everywhere victorious, the Island kingdom, alone of all the belligerent States, had been spared the direct effects of war. In spite of the many blows from which it had not been completely spared, it was able to remain at work and to keep the machinery of its industrial life in motion. In conformity with the difference obtaining between sea and land warfare, Great Britain had—as Mahan says—carried on the war rather with money than with the sacrifice of men's lives, yet, even so, she had loaded herself with a heavy burden of debt in order to prosecute the war and to assist her allies, as well as to support her trade, which was struggling hard for existence against the continental boycott. This burden of debt was, however, equivalent rather to an increase of capital for the expansion of business, than to a real debt. The financing of the war yielded England rich gains as soon as the crisis was over and peace restored, for her naval victories had annihilated the trade not only of her opponent, but of her allies and of the neutrals as well; Great Britain stood, therefore, without competitors when she once more set all her energies to work on the conclusion of peace.

Even at that period one could speak of a world-economy, but in the period following upon the Napoleonic wars the whole world really formed only a single economic body, in which Great Britain, almost alone, represented the type of a maritime and industrial State; her trade was the connecting link between England as "the workshop of the world" and the other countries, most of which were still organized on an agrarian basis, and delivered their raw material and produce to Great Britain in exchange for her colonial merchandise and manufactures. In proportion as other countries recovered from the consequences of the long war, their population and financial power developed; the political events of the 'sixties and 'seventies created populous individual states. As a result of this process they were transformed from agricultural to industrial communities. The oversea buying and selling markets now became of value to them also; they gradually developed into maritime, commercial, and Colonial States. This development was favoured by the immense progress made, just at that period, in the entire means for communication and transmission of information. Nations were brought into closer touch by railways, steamers and telegraphs. They became acquainted with each other's needs, and it was only natural that a greatly increased exchange of goods should result from this change.

Thus, from what had hitherto been an undivided economic

body of the whole world, with a wholly British organization, there was evolved, automatically, a world-economy of another and more complicated kind. All the great States have approximated, in their economy, to the original British prototype; and the characteristic feature of the present state of affairs is the parallel advance and competition of these similar economic activities on the sea. THE ECONOMIC LIFE OF ALL STATES IS TO-DAY DEPENDENT ON THE SEA, perhaps in a different degree, but nevertheless in the same manner as in their prototype, Great Britain. In continental States, this dependency is caused not by oversea traffic alone, but it is also determined by the fact that—for goods in bulk especially—the sea-route is the cheaper; so that the exchange of goods, even in the case of countries having adjoining land frontiers, is for the most part effected by sea. It may be said without exaggeration, that the sea, traversed as it is by an ever growing fleet of steamers, has become the great high road of the world's traffic, all other trade routes being merely affluents to the sea. The sea first attained its importance for continental countries through the extension of their network of railways and inland waterways; and the development of a country's means of communication may be said to be merely a question of bringing places nearer the sea.

It is seen, therefore, that the sources of welfare of every nation, now as ever, are within the country itself, whether it be in mineral treasure, in natural home products, or in the value of productive labour; but the economic activity of the great commercial States has brought it to pass that no State can any longer dispense with the open highway of the sea. This is the reason for the attitude of the great commercial States of to-day towards war. Land warfare must protect territorial possessions and home industry except where—as in the case of an island kingdom like Great Britain—naval warfare is able to do that also. Naval warfare can only touch one limb of the whole system of traffic and commerce referred to above, namely, sea-borne trade; nevertheless, the interruption of sea-borne trade, hampers or brings to a standstill almost the entire system of economic activity, and demonstrates that the whole country is dependent on the sea, and therefore on naval warfare. To this state of vulnerability to naval warfare, which has long existed for Great Britain, the Continental States are approaching more and more. The conditions obtaining at the end of the Napoleonic Wars have, therefore, changed. The economic dependence of the other Powers on England—which obtained at the beginning of last century—no longer exists to-day, it has, however, changed into a MILITARY DEPENDENCE by reason of the fact that the Continental States have now become more vulnerable to England's principal weapon, namely, naval warfare. The attempt to diminish this military dependence on Great Britain is the logical outcome of recognition of this fact; and it is in this manner that the naval armaments, with which Germany is burdened to-day, have arisen; for military dependence on Eng-

land would mean reconstituting economic dependence in a worse form. It would mean existing by favour of a rival.

In the foregoing I have in part drawn upon a pamphlet published by me in 1905,¹ in which these conditions are described in a chapter entitled "The Great Commercial States of the Present Day and Naval Warfare." In order, however, to give the other side a say, I will adduce an English opinion, and one, moreover, which is not drawn from the controversies of to-day, but which comes to us from a period when things were considered in England more objectively. I might even say more from the historical standpoint. Spenser Wilkinson, one of the principal advocates of a powerful English navy, at the end of the eighties, wrote as follows²:—

"England emerged from the wars with the French Empire not merely superior at sea to any other Power; there was no other naval Power. All the other navies had been destroyed in the conflict, and the sea was all her own.

So tremendous was this result that for the greater part of the nineteenth century England has been able to do as she pleased at sea. She has held Asia, Africa, Australia, and the Islands of the Pacific, in the hollow of her hand. The position has been too great for us, and we have forgotten the duties out of the fulfilment of which it sprung. Meanwhile, during the years of our indifference, Europe has been transformed. Germany and Italy have shaken off the dominion of Austria and the tutelage of France, and have become nations. They too have built fleets, they too have discovered that the ocean is the great highway, and they will not be shut off from it. France, in the effort to renew her strength, has been obliged to re-create her naval power, and even Russia has prepared to assert herself on the sea. All these Powers find England at their gates. Most of them have chafed at her monopoly of the sea. There have been significant warnings that it will be challenged, and that one of three things must happen: either England must create a navy superior to those of the rest of the world combined, and must so use it in the service of the world as to satisfy the intelligence and the conscience of mankind; or she must enter into partnership with that half of Europe whose aims most nearly agree with her own against the other half which rejects those aims; or, if neither of these courses is possible, she must submit to naval defeat, and disappear from the list of great Powers and from the future pages of history."

If, with the experience of to-day, we look back upon these utterances, we see that Great Britain has endeavoured to carry out the latter programme. To create a fleet superior to all others taken together would, no doubt, be beyond her power to-day. She has, therefore, contented herself with less. It appears doubtful, moreover, whether an England all-powerful at sea would have succeeded in utilising her fleet to the satisfaction of mankind at large, as here proposed. A sentence which

¹ "Der Seekrieg." Trubner, Leipzig.

² "The Great Alternative. A Plea for a National Policy," pp. 18, 19.

the author of the above quoted passage places at the head of one of the next chapters of his book contradicts such a supposition.

"The function of every Government is to promote, not as is some times vaguely imagined the welfare of mankind, but exclusively that of its own subjects." An endeavour has, however, been made to carry out the second proposition of the programme, and 'divide et impera' may still be regarded to-day as one of the principal maxims of English policy towards Europe.

What is, however, of more importance for my argument is that I read in these words of the English author an explanation and a confirmation of the views which I myself had previously expressed. That the other nations would content themselves with what England chose to leave them, as their portion of the sea, "according to the intelligence and conscience of mankind," the author himself can scarcely have believed.

He does not even deny them the right of knocking at the door which England guards with armed force; he only wishes England to protect herself by policy and by armaments against any such action on their part.

Though the British point of view has thus been put forward I shall now endeavour to consider the matter objectively, and to treat the situation which is developing—or which has already come to pass—rather as the result of a process of historical development, a development to which Great Britain has had to conform.

If we turn to the present we see, indeed, that among Britons who are given to calm thinking this objective manner of considering the problem is again making headway—though it is a conception which often threatened to get lost in the heat of discussion.

For instance, only a short time ago the *Morning Post* published a letter stating that a powerful fleet was for England a necessary means of defence, but for Germany an "aggressive luxury" (superfluous means of attack); and this was only one voice among many of the same sort.

The year 1889 may be regarded as the commencement of the competition in armaments which now ensued. The monitors of the British nation, who had bewailed her indifference, were successful. The "Naval Defence Act" of 1889 sanctioned an expenditure of some £21,500,000, thus, at a bound, introducing an increase in the British Navy. This Navy, to which—at that time—no nation, excepting France, could oppose another capable of serious resistance, was in a short period strengthened by 10 battleships, 42 cruisers, and 18 torpedo gunboats. In the same year Germany, where, for more than 10 years, the construction of battleships had ceased, voted four ships of the "Brandenburg" class as the nucleus of a battle

fleet for her young Emperor, who had recognised the ocean as the "Highway of the World" for his rising nation, and who would not allow his country to be excluded from it. At this time also the United States of America launched her first sea-going battleship.

The work of strengthening the war fleets, in accordance with the growing maritime interests of both countries, has been continued on the other side of the Atlantic, as well as on this; but although Mr. Spenser Wilkinson rightly regarded the opposition to Great Britain on the part of all the continental States which had a share of the sea, as a natural consequence of historical development; and although the navy of the United States is not inconsiderably superior to that of Germany¹; yet in British public opinion to-day, Germany alone is regarded as "the enemy"; and it is only for us, whose maritime interests have increased so astonishingly, that they are to-day in every way comparable to those of England, that a strong fleet is supposed to be a superfluous weapon of attack.

I may assume that the further march of events is known. The passing of the German Fleet Law of 1898 and its modification in 1900, aroused uneasiness in England. But when Germany actually carried out what she had openly propounded as her future plan, when—from sheer necessity, in order not to pit unsuitable fighting units against the new English type—she even followed up with the building of Dreadnoughts, then the British believed, or sought to make themselves and the rest of the world believe, that this constituted an unjustifiable threat of war on the part of the Germans. The British would not have grudged us a harmless fleet, but a fleet which could really give us influence in cases where—even quite apart from Great Britain—the continual increase in international competition might check our economic progress, and thus create insufferable limits to our development as a nation—such a fleet we were not to have.

We have thus reached the kernel of the armament question. We have demonstrated that a navy is a necessity for all States who wish to have a share in the advantages of the sea, and we have emphasised the rivalry between Great Britain and Germany. How strong, then, must the German Navy be in order to give us what we need in the competition of nations? The relationship to the magnitude of maritime interests at stake gives us some idea, but it cannot be regarded as an absolute standard. However, we may, perhaps, arrive at such a standard

¹ "Nauticus" gives the following figures for 1910:—

English battle fleet (battleships and armoured cruisers) 94 vessels; 1,335,870 tons. U.S.A., 44 vessels; 660,210 tons. Germany, 35 vessels; 419,580 tons.

by endeavouring to form a picture, from the standpoint of purely academic strategy, of the possibilities which might arise in a naval war.

The task of strategic defence may be, very generally, described as holding fast to what is possessed in peace. In a land war, where there are adjoining frontiers, this would involve defence of the land frontier. But in the case of countries separated by the sea, the above description is inadequate. In time of peace the sea is the common possession of all; and if one wishes to retain the possession of it in war, one must, by force of arms, push forward one's frontier right up to the enemy's coast. It is only the strategic offensive, taking its stand before the enemy's ports, which can bar the access to the sea to the hostile fleet, or defeat it when it runs out; that can secure to one what one already held in peace. It is, then, according to the nature of things, that this is the form which naval warfare is bound to take.

But the relinquishment of one's home bases, the necessity of maintaining communication with them by sea, the dislocation which such a form of warfare entails for neutrals, and the resistance which may be aroused thereby, all these things demand a considerable margin of power for the State that would act in this way. For us to maintain a navy, as well as the army which protects our land territory—a navy capable of taking the strategic offensive against England—would be an impossibility. Such a navy we have never intended. This demolishes all the arguments which have so greatly embittered the conflict of opinion because they aroused such extravagant fears in England. A really effective attack upon England's trade which is spread all over the world, is an impossibility for us. To bridge over the sea, so as to enable our army to attack, is equally impossible. The unalterable difference in our respective strengths compels us to take up the strategic defensive with regard to England.

The strategic defensive may be of various kinds. In its lowest form, it is limited to the protection of the most important points on the coast by means of fortifications; this form sacrifices the sea entirely, and does not put one in a position to inflict any damage on the enemy, as should be one's object in every kind of warfare.

The employment, in addition to stationary fortifications, of floating means of defence, which, as a mobile arm, can, at any rate, occasion difficulties to an enemy approaching the coast cannot, in spite of any assistance which our torpedo-boats and submarines may afford, prevent him from annihilating our mercantile marine, and from proclaiming a blockade of all our ports, thus preventing the entry of neutral trade also. Deserted harbours on the coast; idle factories throughout the country; falling wages with rising prices; economic decline, if not ruin; such would be the consequences to Germany of so

inadequate a method of warfare. The enemy's position in the world, would, on the other hand, be scarcely shaken.

As third and highest form of the strategic defensive I would designate "DEFENCE BY BATTLE." The object of this form is to bring the enemy to battle on the high seas. It cannot defeat him decisively, once and for all—the difference of strength which is a presumption of the strategic defensive would indeed prevent that—but it must be able to deprive him of so much of his strength that what remains is not sufficient for his purpose. This general definition of the expression "defence by battle" keeps in view the continuation of the war against an enemy who has been defeated in battle, including the creation of a base, attacks on the coast, landing of an army of invasion, etc. Our Fleet Law, which is founded on this "defence by battle," interprets the matter in a broader sense from the point of view both of politics and strategy. It states in its preamble that "Germany must possess a battle fleet of such strength that war, even for the most powerful naval adversary, would involve such risks as to endanger the latter's supremacy." Here the idea of the defensive fleet, of guaranty against war, is clearly expressed. The motives which might betray England into attacking us are to be balanced by the price she would have to pay for our defeat. The gap in her naval armaments which such a Pyrrhic victory would entail, is not to leave her in a position to face other opponents; what remains is not to suffice for England's designs in the world. And here again strategy joins hands with politics in this "suggestion of risk," which is the Alpha and Omega of the German Fleet Law, and thus of the naval policy which it has inaugurated.

What has here been set forth in words, the responsible directors of our policy and of our maritime defence have endeavoured to translate into figures. The outcome was the Fleet Law of 1900 which will mature in the year 1917. Are they right in their calculations? Will Great Britain peacefully concede what we need in the world in order to exist? Or, if it comes to war, which we do not desire, how will the die fall? Neither policy nor war, its *Ultima Ratio*, are arithmetical sums, in which, given correct figures and accurate working, the correct result must invariably ensue. Here it is only the proof which can show whether the sum is right. The British should not, therefore, calculate too nicely as to whether we could do with one or two ships less than are demanded by the Fleet Law, the figures of which are entirely based on the convictions of those responsible. Neither ought there to be any cause for surprise if—as a logical sequence of the idea of "risk"—an increase in our present strength should be contemplated, supposing that a serious disproportion between the strength of the German and British Navies should arise as a result of a very great increase of armaments by Great Britain. It is also impossible to agree

with the views of those who consider possible an understanding between Great Britain and Germany on the naval question—that is to say, if by an understanding is meant that the two countries should enter into mutually binding obligations as to the strength of their naval armaments for all time. I will not here discuss the principles of Sovereignty, which have already been sufficiently thrashed out in the Press and recognised by the representatives of both countries; but it is pertinent to my subject to point out that such agreements are entirely contrary to the very nature of war, quite apart from the fact that they anticipate future political and economic possibilities and the compulsion which these may exert. He who is obliged to go to war because other political expedients have failed, appeals to a decision by arms. He attempts to impose his will by force upon the adversary whom he is unable to convince, or—if not sufficiently powerful for that—at any rate to inflict such injury on him as shall outweigh the motive for war. Shall he then allow his opponent to dictate the armament necessary for this purpose? Can he indeed treat with him at all in this matter?

In connection with this subject I would like to mention one point more. Has not this inter-parliamentary interrogation, which has recently become customary, and to which we have submitted—I assume—in order to leave no means of agreement untried, been carried somewhat too far? Questions in the British Parliament as to the rate of our ship construction are almost invariably answered by our official representatives or by our inspired Press; erroneous or misleading answers, which British Ministers have previously given, are at once corrected. May not this lead to a sort of customary right? Are we not placing ourselves before a tribunal to which we are not subject?

I have arrived at the end of my observations; I may not have been able to answer the anxious questions of many, such as, "Well, what will happen now?" "Are these armaments always to continue then, always piling up in competition? Nevertheless, this retrospect of the year 1889 will perhaps show that, on this side of the North Sea, as on the other, we are approaching more closely to an understanding as to what share of the sea both States are to concede to one another. The British expert whom I quoted in regard to former times, and who is still one of the most competent judges in such questions—held, in agreement with many of his compatriots, that Great Britain must "disappear from the list of great Powers and from the pages of history" if she could not preserve her monopoly in trade and industry. Does she not still stand unshaken although many nations share the advantages of the sea beside her? Is not the corporation of maritime nations which fills the world to-day, a competition at whose head England stands, a sounder structure than the absolute dominion of a single one? This condition of maritime equilibrium, as exhibited by the world-economy of to-day, could however, only have arisen under the protection of

an armed peace at sea such as is exemplified by the present naval armaments. Has it been too dearly bought thereby? Shall we, perhaps, grudge millions and lose milliards? I, myself, believe that in the present organization of the nations which have world-wide traffic and trade, the maintenance of fleets ready for war is just as much in the nature of things as the existence of standing armies intended to secure their territorial possessions has always been. This is a necessary result of historical development, as I have been at pains to demonstrate in the first part of this essay. The more this view is recognised, the sooner will the discussions bound up with the question lose their keen political edge, and their tendency towards war; and above all, the sooner shall we see the last of the anxiety which they produce at the present time.

THE BATTLE OF PRESTON.

NOTE ON FRONTISPIECE.

The scene depicted appears to be the fight at the historic bridge, over the Ribble, outside Preston, between Cromwell's troops and the Scots army under James, Duke of Hamilton, in August, 1648. In Cromwell's letter to the Parliament (20th August) describing his victory over Hamilton, he says:—

"The Duke, with most of the Scots Horse and Foot, retreated over the bridge, where after a very hot dispute betwixt the Lancashire regiments . . . they were beaten from the bridge and our Horse and Foot following them, killed many and took divers prisoners."

The engraving corresponds in style with the copy of a work representing the battle of Tamives (Malplaquet) given in *The Black Horse Gazette*, July, 1908. The helmets and warlike emblems which surmount the Preston engraving also appear on the Malplaquet one. The latter was engraved by Du Bosc, who published it in 1735 "according to Act of Parliament." It is noticeable in the Preston engraving that the costume is of a much later date than could possibly have been worn at the date of the battle in question. This anachronism on the artist's part was doubtless due to ignorance. Within the space of one hundred years, the bridge over the Ribble played a prominent part in British military history. The first occasion has been narrated. The second was during the siege of Preston in 1715, when "General" Forster had omitted to guard the bridge, and narrow pass leading therefrom to the town, thus leaving the approach open to General Wills and the Royalist forces marching from Wigan. The third historic occasion was when Prince Charles Edward's Scottish army passed over the bridge in safety on their retreat from Derby—threatened by Marshal Wade's northern army on their right flank, and by the Duke of Cumberland's forces in the rear.

HOW FAR WAS THE NEGLECT OR OBSERVANCE OF THE TACTICAL PRINCIPLES LAID DOWN IN OUR FIELD SERVICE REGULATIONS RESPONSIBLE FOR:

(A) THE FAILURE OF THE RUSSIANS IN THE SECOND BATTLE OF PLEVNA (JULY, 1877)

OR

(B) FOR THEIR SUCCESS IN THE ATTACK ON LOVTCHA (SEPTEMBER, 1877).

BY

CAPTAIN S. W. H. RAWLINS, *Royal Field Artillery.*

INTRODUCTION.

THE Battles of Plevna demonstrate very clearly how difficult it is for a nation to profit by the war experiences of others, unless that nation can boast the existence of a General Staff highly trained and given to military study. Between 1861-1872 three great campaigns had taken place; and yet the army of Russia in 1877 had utterly failed to grasp the predominant lessons of those campaigns. The effects of bad reconnaissance as exemplified by the Austrians before Sadowa or by the French before Metz; the fruitlessness of successive attacks as at Cross Keys; the futility of pure artillery fire as a preparation for attack as at Gravelotte; the want of co-operation as at Gettysburg; the value of entrenchments as employed in the War of Secession; the fatal tactics of the Austrians (heavy columns relying on the bayonet rather than on fire superiority) at Trautenau and Chlum; the inefficient service of the Prussian artillery in 1866; none of these proved errors, so fruitful of disaster, had been taken to heart by Russia.

It may appear at first sight that it can be scarcely justifiable to base destructive criticism of past campaigns on the authority of our Field Service Regulations of to-day.

But this work is not based on the experiences of any given campaign, nor merely on the latest campaigns.

Fundamental principles of strategy and tactics do not change, and "Their violation, in the past, has often been followed by mishap, if not by disaster." (F.S.R., page 11.)

A. THE SECOND BATTLE OF PLEVNA.

30th July, 1877.

I. The Commanders. II. Reconnaissance. III. Numbers. IV. Operation Orders. V. The Battle. VI. The Decisive Attack. VII. Observation of Principles. VIII. Skobelev's Action on the Extreme Left.

(Sketch Plan—Plevna. 30th July, 1877, page 1442.)

I. THE COMMANDERS.

"Skill cannot compensate for want of courage, energy, and determination, but even high moral qualities may not avail without careful preparation and skilful direction." (F.S.R., page 11.)

The two senior Russian Generals at the battle under review may be said to have laboured under the disadvantages implied in either part of the above sentence.

Krudener was reported to be a good soldier, but to be a man prone to take life too easily and lacking in energy and decision. That these faults were his is indubitably shown by two facts which bear seriously on the Russian failure.

In the first place Krudener had grave doubts as to the wisdom of his attacking Plevna before he had received reinforcements. He telegraphed for instructions to Headquarters and received a reply commenting sharply on his hesitation to obey orders. He proceeded to issue orders for the attack; but, perhaps fearing reprimand, failed to make clear to Headquarters the good reasons for his doubt, and so cannot be excused for having undertaken a hazardous operation on the ground that he had been ordered to do so by higher authority having full knowledge of the situation. (F.S.R., page 27.)

In the second place we note the entirely indefensible arrangement whereby Shakofski practically acted as an independent commander. The latter was Krudener's social superior and almost his equal in military rank. Friction existed between them, and Krudener gave way as far as he could. But an army cannot serve two masters, and it was the part of a strong man either to bring Shakofski to loyal obedience or else to effect his removal.

Shakofski, on the other hand, was a brave, impetuous but quick-tempered man. He was in no sense a scientific soldier; the "careful preparation and skilful direction" were wanting in all his movements. (F.S.R., page 11.)

But there was one man on the Russian side who was a scientific soldier and who had studied and grasped the lessons of past campaigns, General Skobelev. His sound military knowledge had developed into instinct, and that, combined with the highest moral qualities, formed the brilliant commander of a small force which chiefly contributed to preventing defeat from becoming disaster. (F.S.R., page 11.)

In an endeavour to treat the incidents of the battle in logical sequence, we may now consider :—

II. RECONNAISSANCE.

"Timely information regarding the enemy's dispositions and the topographical features of the theatre of war is an essential factor of success in war." (F.S.R., page 95.)

"Time spent in reconnaissance is seldom wasted." (F.S.R., page 102.)

"As the commander of a force will form his plan of action on the result of the tactical reconnaissance. . . ."—(F.S.R., page 102.)

"The first object is to cut the lines of supply and communications (and) . . . to make as complete a reconnaissance of the place as possible. . . ." (F.S.R., page 139.)

These brief extracts insist forcibly on the necessity for and importance of thorough reconnaissance before an action.

Ten days elapsed between the first and second Battles of Plevna, a period which offered exceptional opportunities for thorough and vigorous reconnaissance, both personal and tactical; but reconnaissance of this nature was not carried out. Want of surveillance and bad reconnaissance can only account for the fact that since the 20th July reinforcements had reached Plevna unhindered and that several redoubts had been erected unknown to the Russians.

Even if the Russians were not strong enough to attack Plevna during those ten days, their numerous cavalry and artillery should at least have prevented the erection of further fortifications. It is true that since 20th July Krudener had made certain personal reconnaissances and had become aware that reinforcements for Osman had arrived, and that the Turks were entrenching; it is also true that both he and Shakofski personally reconnoitred the Turkish dispositions on 29th July.

But these reconnaissances did not go far enough. They only led Krudener to decide that the Russian columns should be directed against certain points, but he had no idea as to the strength in which these points were held. No endeavour was made to carry out any tactical reconnaissance. It was not realised that "reliable information as to the enemy's main forces will rarely be obtained without fighting." (F.S.R., page 102.)

Napoleon's maxim, "On s'engage partout, et on voit," was forgotten.

And so the Russian attacks were straightway delivered, not on the outcome of tactical reconnaissance but on the results of insufficient personal reconnaissance.

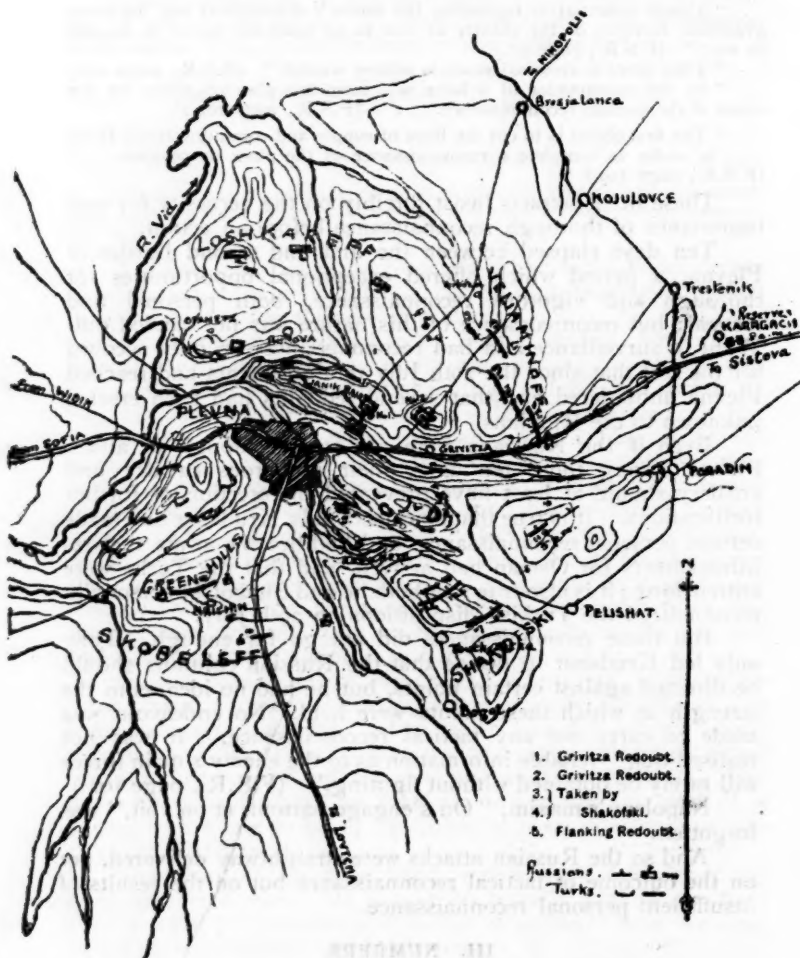
III. NUMBERS.

"Superior numbers on the battlefield are an undoubted advantage, but . . . above all a firm determination in all ranks to conquer at any cost (is) the chief factor of success." (F.S.R., page 107.)

The Russian Forces before Plevna were superior in numbers to Osman's troops in a proportion of about three to two. But granted the tactical advantage conferred upon the Turks by their

THE SECOND BATTLE OF PLEVNA.

30TH JULY, 1877.



excellent defences and their boundless supply of ammunition, as well as by their known tenacity in defence, it is easy to understand Krudener's hesitation to attack with a force which he, quite reasonably, considered to be too weak in numbers for the purpose. There was therefore special need for that firm determination which is the chief factor of success. But it is doubtful if Krudener can ever have felt confident that the general situation and the measures which he consented to adopt, promised any reasonable hope of success.

IV. OPERATION ORDERS.

The attack having been determined, do the orders issued by Krudener find approval of their principles in our Field Service Regulations? Krudener's orders, in a condensed form, read as follows:—

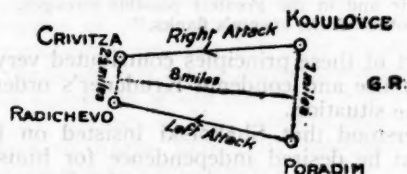
- i. **EXTREME RIGHT**—LOSHKAREFF.
12 squadrons; 1 battery.
To guard right flank.
- ii. **CONNECTING PARTY**.
3 squadrons.
- iii. **RIGHT ATTACK**—VELIAMINOFF AND SCHILDER-SCHULDNER.
10 batteries; 18 battalions.
Attack from Kojulovce on Grivitza Redoubt.
- iv. **CONNECTING PARTY**.
2 squadrons.
- v. **LEFT ATTACK**—SHAKOFSKI.
2 squadrons; 6 batteries; 12 battalions.
Attack from Poradim via Radichevo on S.E.
- vi. **EXTREME LEFT**—SKOBELEFF.
12 squadrons; 2 batteries.
To guard left flank.
- vii. **GENERAL RESERVE**—KRUDENER.
4 squadrons; 4 batteries; 6 battalions, near Poradim.

NOTE:—Kojulovce is about 7 miles from Poradim.

Radichevo " " 2½ " " Grivitza.

Poradim " " 8 " east of the line

Grivitza—Radichevo.



"The object of an operation order is to bring about a course of action in accordance with the intention of the commander, suited to the situation, and with full co-operation between all arms and units." (F.S.R., page 24.)

"The constant maintenance of communication between the various parts of an army is of urgent importance; it is on this to a great extent that the possibility of co-operation depends." (F.S.R., page 18.)

At this date one can only presume that Krudener's orders indicated his intentions; below it will be argued that his intentions and consequent orders were not suitable to the situation.

But the most biased apologist could not urge that Krudener's orders give any hope either of co-operation or of constant inter-communication. The quasi-independence of Shakofski, the great gap between the main attacks, the inadequate connecting parties, and the distance of the General Reserve, all these things thrust themselves upon one's notice as little calculated to ensure co-operation.

"(In the case of an army which does not possess a decided superiority over its antagonist). A commander may decide to obtain the decision of the battle . . . with a large general reserve which he has retained in his own hand. By keeping a considerable part of his force under control, he is in a position to take advantage of an enemy's mistakes and to choose his own moment for striking." (F.S.R., page 111.)

Krudener had not at his disposal a force possessing a decided superiority over its immediate enemy, and he appears to have had some idea of influencing the battle by his General Reserve.

In view of the lack of information available as to the Turkish dispositions, one might expect to find an unusually strong Reserve kept in hand. But on the contrary the strength of that General Reserve was emphatically inadequate to the situation. At the beginning of the battle it was less than one-sixth of the total force engaged, and by 4 p.m. it had been almost exhausted by successive calls upon it. (F.S.R., page 134.) Nor can it be said that a suitable position was early chosen for the Reserve. The valley of the Grivitza Stream, separating the two main attacks, offered an obvious line of advance for a Turkish counter-attack. Yet we see the General Reserve posted several miles in rear of the right attack, which was already the numerically superior, whereas the ground rather favoured the success of the left attack.

"It is seldom either possible or desirable to attempt to overwhelm an enemy everywhere . . . The objective of the decisive attack should be struck unexpectedly and in the greatest possible strength. . . This will usually be one or other of the enemy's flanks."

The neglect of these principles contributed very largely to the Russian repulse and condemn Krudener's orders as being unsuitable to the situation.

It is understood that Shakofski insisted on this double attack, and that he desired independence for himself, having discovered by personal reconnaissance the importance of the heights about Radichevo. It is dangerous to dogmatise concerning attack over unknown ground, especially when criticism is backed only by small scale maps; but the above-quoted principles demand, more especially in view of the comparatively slight advantage in numbers to the Russians, that the decisive attack should have been made against one or other of the two

objectives selected, while the enemy was pinned to his ground by most vigorous action in the other areas.

With regard to this point it may be noted that :—

- i. The South (and S.E.) was the strategic Turkish flank.
- ii. The ground occupied by the right flank was cramped and offered indifferent artillery positions.
- iii. The ground about Radichevo was favourable to the attack, and offered excellent artillery positions.

Yet we find the stronger attack made upon the right (north) accompanied by over 100 guns, many of which were unable to find positions; while the left (south) attack which despite its numerical inferiority made considerable headway, was accompanied by only forty-eight guns, although the ground could have taken all those which were unable to find room in the northern area.

V. THE BATTLE.

"When the forces are engaged the reconnaissance must be continued throughout the entire action." (F.S.R., page 105.)

The morning of 30th July found a thick mist hanging over the battlefield, offering a favourable opportunity for daring reconnaissance and for the surprise of outlying works.

On the extreme left General Skobelev took full advantage of the circumstances, with results most important to the final issue; but no benefit accrued to the main columns of attack from the mist, save merely that Veliaminoff contrived to deploy his infantry unperceived within 2,000 yards of the Grivitza Redoubt.

"The artillery will take such preparatory steps as will enable it to open fire as soon as a target is presented.

In the early stages, while the infantry are deploying and developing the attack, fire should not be opened with more guns than are necessary to accomplish the task in hand. . . ." (F.S.R., page 115.)

The fog lifted about 8.30 a.m., and thereupon began an artillery duel which lasted for some six hours, during which time not a rifle shot was fired nor a soldier moved forward from the columns of Veliaminoff or Shakofski. Despite the outstanding lessons of past campaigns, and even despite their disastrous experiences on 20th July, the Russians still blindly adhered to the belief that a prolonged bombardment by artillery of an enemy's position would inevitably and successfully pave the way for the advance of their infantry columns.

The Turkish works were fully equipped with traverses, shelter trenches and support trenches, behind which the Turkish infantry lay unharmed during the long hours of the bombardment. The Russians failed to realise that the difficulty is not to demolish parapets but to crush the *moral* of the defenders. There was no development of the attack by the infantry, and therefore there was no human target of importance presented to the guns. The losses occasioned by the duel were approximately equal on either side, and were practically negligible.

Early in the day Loshkareff's efforts against Opanetz on the extreme Russian right proved abortive. Loshkareff failed to follow the principle of pinning his immediate opponents to their ground (F.S.R., page 113), with the result that Osman soon realised that no decisive attack upon this section was intended and was thereby enabled to withdraw a portion of his forces from that area to other more menaced fronts. It cannot be urged that Loshkareff was furnished with insufficient strength in troops for his purpose, when Skobelev's vigorous and far-reaching operations on the extreme left are regarded. It may be noted, too, that about 10 a.m. the weak party connecting Loshkareff and the right attack was driven back by Turkish cavalry, and communication between the units indicated was broken.

At 2.30 p.m. Shakofski decided that the moment had arrived for an advance and issued orders to that effect, Krudener, ten minutes later, directing Veliaminoff to move on the Grivitzza Redoubt.

"The essence of infantry tactics consists in breaking down the enemy's resistance by the weight and direction of its fire, and *then* completing his overthrow by assault." (F.S.R., page 17.)

"All leaders, down to those of the smallest units, must endeavour to apply, at all stages of the fight, this principle of mutual support. Aided in this way the infantry . . . in conjunction with the artillery . . . will endeavour to gain superiority of fire." (F.S.R., page 116.)

"All important technical points . . . should, when gained, at once be put in a state of defence so that attempts on the part of the enemy to re-capture them may be defeated, and they may be made to serve as supporting points to the attack." (F.S.R., pp. 116-117.)

"If . . . the intensity of the hostile fire precludes any immediate advance, it may be expedient for the firing line to entrench itself." (F.S.R., page 117.)

The total neglect of the fundamental principles quoted in the above four excerpts from our Field Service Regulations, combined with the lack of reconnaissance and the faulty orders on which we have already touched, account for the non-success which attended the general conduct of the Russian attack. The Russian infantry on the right advanced and conducted themselves throughout the day with a bravery, stolidity and endurance under fire beyond all criticism. But such moral characteristics could not prevail against the manner of their leading. The Turkish redoubts were not overwhelmingly strong in themselves, but depended rather on the carefully-sited shelter trenches which supported and flanked them.

The absence of any development of the attack by advanced troops presumably accounts for the fact that the gravity of the fire from these supporting trenches was not realised. However this may be, the fact remains that the Russian infantry were led straightway to the assault with but a screen of skirmishers covering the advance of their heavy columns. Despite the nature of the Turkish defences no attempt was made to take in flank the objectives selected for attack; the troops both of Veliaminoff

and of Shakofski were led forward to a frontal attack, and with their units intermingled and confused.

There was an entire absence of any plan for breaking down the Turkish resistance by a superiority of infantry fire; there was no arrangement for covering fire; there was no conception of mutual support. Only on the left (Shakofski) was any artillery support at all afforded to the advancing infantry, and there but of the slightest, the majority of the guns being left behind when the infantry advance commenced. According to the preconceived Russian ideas the artillery should have accomplished all that it was necessary for it to do; all that remained was for the infantry to overwhelm the enemy by the weight of its columns and with the bayonet.

Owing chiefly to the magnificent bravery of the regimental officers and men, the first line of trenches was taken on the north, while a considerable measure of success attended the early efforts of Shakofski's command. The troops who had taken the first line of trenches before Grivitza found themselves held up by the second line of trenches, and were unable to advance under the decisive Turkish gun and rifle fire.

Shakofski's troops, who managed to take two works of importance and most of the trenches south-east of Plevna, found little cover in them, and were harassed all day by constant Turkish counter-attacks which finally drove them back.

Entrenching tools were not provided in any quantity among the Russian arms; their use was neither understood nor encouraged. But it is scarcely debatable that, had the Russian troops been in a position to follow the precepts quoted above as to the use of entrenching, Veliaminoff's troops would have suffered far less, while Shakofski might well have been able to hold his own and so to have used the positions which he had won, to develop the further attack.

It is rather for convenience of reference to our Field Service Regulations than warranted by the actual course of the battle that another paragraph is commenced dealing with:—

VI. THE DECISIVE ATTACK.

"As the crisis of the battle approaches, the chance of successful cavalry action increases." (F.S.R., page 118.)

"The greater the difficulties of the infantry, the closer must be the support of the artillery. . . a portion of the artillery must be pushed forward to within close artillery ranges . . . to deal with possible counter-attacks, and to give the infantry immediate assistance. . . " (F.S.R., pp. 118-119.)

"The climax of the infantry attack is the assault which is made possible of fire." (F.S.R., page 110.)

"Should it be necessary to give the impulse for the assault from the rear, all available reinforcements will be thrown into the fight. . . " (F.S.R., page 119.)

"The launching of the general reserve in the attack will be the signal for the application of the greatest possible pressure against the enemy's whole front. . . " (F.S.R., page 117.)

"Success at the vital point will mean ultimate success at all points." (F.S.R., page 120.)

"The power of an army can be exerted only when all its parts act in close combination." (F.S.R., page 12.)

With reference to the above excerpts:—

It has already been remarked that Loshkareff's cavalry found no opportunity for action, not even against the Turkish counter-attacks and their slight offensive cavalry action on the north. There was no close support by the artillery with Veliaminoff or Shakofski, let alone any advance to close ranges. All writers concur that the greater part of the Russian artillery was left far in rear at the crisis of the day.

The assaults on the Grivitza Redoubt had none of that direction or thoroughness which our Field Service Regulations prescribe. They were not warranted by any superiority of fire; they were not executed by all the available troops.

Regiment after regiment successively endeavoured to storm the Grivitza redoubts and was successively brought to a standstill.

So the eighteen battalions on the north achieved nought, and the Turkish reserves were not required; so much so that Osman was able to withdraw troops from the north to reinforce the south, where the Turks were seriously menaced.

Shakofski's early attacks met with success for which it is not difficult to account. Despite his numerical inferiority to his immediate opponents, he had certain advantages over Veliaminoff. Good artillery positions about Radichevo had at least given the preliminary bombardment some effect. Shakofski brought undeniable energy and determination to bear; he ordered his troops into battle as a whole, with a definite reserve in hand; the ground was not unfavourable to the attack; and his left thanks to the action of Skobeleff to which we shall shortly refer, was secure. So he managed to capture the first line of Turkish works, to approach the second line and to repulse two counter-attacks with his reserves.

But what of the General Reserve retained under the personal control of Krudener? We have already commented on its numerical inadequacy. But in studying the movements of the units which composed it, we see that it altogether lost the characteristics of its special mission. From the commencement of the infantry attack, it had been employed, by successive units, as special reserves to the two main attacks. When the crisis came at 6 p.m., there were but three companies left. In a word the General Reserve had not been retained in the hands of the commander; so when it was required, it had ceased to exist. The timely arrival of 124th (Serpokeff) Regiment, combined with the last remnants of what had been the General Reserve, just served to enable Veliaminoff to withdraw.

It only remains to be said that the full power of Krudener's force was never exerted, for the three arms never acted in combination. The preliminary work of the artillery, followed

by the unaided efforts of the infantry, together with the absence of any cavalry action *en masse*, combine to make as glaring an instance of lack of combination among the three arms as can be found in the annals of Military History.

VII. OBSERVATION OF PRINCIPLES.

Two incidents of the battle call for favourable comment :—

"Notwithstanding the greatest care and skill in framing orders, unexpected local circumstances may render the precise execution of the orders given to a subordinate unsuitable or unpracticable." (F.S.R., page 27. *et seq.*)

The proper assumption of responsibility incurred by non-compliance with orders is strikingly instanced by the action of a general staff officer detailed to guide the 119th Regiment from the General Reserve to the assistance of Shakofski. Becoming aware *en route* of the advance of a Turkish counter-attack via the Grivitza Valley, this officer moved the Regiment to meet the danger which, if unchecked, would have resulted in a considerable Turkish force interposing between Veliaminoff and Shakofski.

This incident occurred at 5 p.m. when affairs were becoming critical and when such an intervention might have had most disastrous results for the Russian arms.

VIII. SKOBELEFF'S ACTION ON THE EXTREME LEFT.

Skobelev commanded his small force of twelve sotnias, twelve guns, and one battalion in a way that has received the highest praise.

The energy and thoroughness of his preliminary reconnaissance; his careful posting of small parties to keep touch with Shakofski and to watch the Vid; his provision for safety of the Russian arms from the direction of Lovtcha; his ready grasp of the importance of the Green Hills, whence, were the Turks in position, Shakofski's left could have been enfiladed; his determination to hold his own at any cost to the end of the day; his method of so doing by most vigorous, sustained, and inter-supported action; all these things point to his understanding of the principles of war, and resulted, to his lasting credit, in his pinning to their ground all day Turkish troops many times his superior, whose energies would otherwise have been directed to the final overthrow of Shakofski. (F.S.R., page 113.)

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(To be continued.)

The following article is, by agreement with the Society for Nautical Research, reproduced from the July number of "The Mariner's Mirror."

THE COAST SIGNAL STATIONS AND THE SEMAPHORE TELEGRAPH.

BY CAPTAIN R. HUDLESTON, R.N.

THE following notes concerning the establishment of the coast signal stations, and of the semaphore telegraphs, are made from documents in the Public Record Office. Though the signal stations in the South of England were completed before the first of the telegraph lines, it will be convenient to give the history of the telegraphs first, since, as soon as they were completed, the coast signal stations were dependent on them for their full effect.

THE SEMAPHORE TELEGRAPHS.

For general references as to the establishment of the telegraphs, it will be found most convenient to use the Admiralty Digests, of which Nos. 66 and 67 of 1795 and Nos. 70 and 71 of 1796 give the necessary dates. The reference number in these books is 59 (11), but the actual letters referred to are mostly destroyed.

On January 27th, 1796, Lord George Murray reported that the London and Deal telegraph was completed, and Mr. Roebuck, a surveyor, was appointed officer in charge of telegraphs with a salary of £300 a year.

On March 24th, 1796, the Portsmouth to London telegraph was in hand, and a letter from the Navy Board to the Admiralty (Navy Board, 2221 of April 18th, 1796) stated that the agreement with Mr. Roebuck to construct the stations had been signed. On August 8th of that year Lord George Murray was rewarded, by an Order in Council, with a gift of £2,000. On August 10th, 1796, the Port Admiral at Portsmouth was instructed "to use the telegraph on occasions of importance or when in want of immediate directions."

A short telegraph line of three stations, from Torbay to Plymouth, seems to have been completed about June 8th, 1796; this was not under Roebuck.

On October 15th, 1803, the War Office was erecting a telegraph of six stations between Shoeburyness and the Tower (W.O., 703). Land signal stations connected this line with Colchester, Ipswich and Yarmouth.

On December 13th, 1803 (Adm. Sec. In Letters, 641) the War Office was erecting a telegraph between Dublin and Galway. There were frequent false alarms from that direction, and on October 7th, 1804, the hired armed ship *Troubridge* was permanently stationed at Galway. (*Ibid.* 619.)

The *Troubridge* was, I think, discharged early in 1806, when the hired "convoy ships" were given up; she was originally taken up as a convoy ship herself at Plymouth. Her functions seem to have been to scout locally if needed, and to guard the telegraph terminus. The ship herself is described (Admy. Acct. Gen., 96) as *Sir Thomas Troubridge*, 315 tons, 50 men, armament 18 long 6 prs. and eight 18 pr. carronades; her tire price was £5,985 per annum.

All telegraph stations had to keep a journal of messages, but I have failed to find any such journal at the Record Office. The Commander-in-Chief at Portsmouth sent copies of telegraphic messages, sent and received, in his daily acknowledgment of letters and orders. The question and answer by telegram from Portsmouth to the Admiralty and back generally took from 1hr. 20 min. to 2hrs.; but the service was frequently interrupted, and seldom appears at all in the winter months.

In September, 1805, there occurred a great scare that the enemy were using the telegraph. On August 10th, 1805, an urgent warning was sent by the Admiralty (Adm. Sec. In Letters, 1894, Portsmouth, C. in C.) that invasion was imminent.

On September 11th, 1805 (*ibid.*) the Flag-lieutenant to the Commander-in-Chief found a private code in improper use among the telegraph men, who say that they have nothing to do with the flag-lieutenant, Rear Adm. Coffin, or Adm. Montague, the Commander-in-Chief, and are absolutely under the orders of Mr. Roebuck. The Commander-in-Chief referred the matter to the Admiralty, who on September 18th, 1805, replied that Mr. Roebuck, the engineer officer in charge of telegraphs, who was ordered to exercise the men, had a private code, by means of which he could communicate with London. "He acknowledges once to have sent up *Prawns* by signal to London." He was reprimanded by the Admiralty and his code suppressed.

Before the establishment of the Plymouth telegraph, the arrival of the Western Squadron at Torbay, and its sailing thence, was reported by coast signal station to Portsmouth, and telegraphed from there to the Admiralty. Difficulties in the coastwise line resulted in Mr. Goodhew being sent (May 25th, 1805. 153, Minutes) to erect additional coast signal stations between Portsmouth and Plymouth. A mistake in the Admiralty Office substituted Falmouth for Plymouth, the mistake arising probably out of the fact that on July 29th, 1805 (153, Minutes) Falmouth was made the victualling base of Cornwallis's Fleet.

On October 23rd, 1805 (155, Minutes) estimates were called for for a direct telegraph line from London to Plymouth. On November 2nd (*ibid.*) Mr. Roebuck was surveying the route for this; on December 4th (*ibid.*) the Admiralty ordered the Navy Board to take measures for continuing the new telegraph line from Plymouth to Falmouth; and on August 28th, 1806 (Adm. Sec. In Letters, 823) the telegraph was working to Plymouth. The line was completed before this, for on May 4th, 1806, Mr. Roebuck carried out his test message from London to Plymouth, his preparative call taking 17 minutes. It proved possible to send the 1 o'clock signal (a timesignal?), to Plymouth in three minutes on 7th December, 1807 (Pro. R., 4998).

On December 7th, 1807 (Pro. R., 4998) London and Yarmouth were being connected by telegraph. Roebuck stated that this line brought the number of stations for which he was responsible up to sixty-five. These were:—

London to Deal	... ..	12 stations.
Branch line to Sheerness	... ..	3 stations.
London to Plymouth via Portsmouth	... ..	31 stations.
London to Yarmouth	... ..	18 stations.

These make 64, the headquarters station being perhaps counted as the sixty-fifth. There seems, however, to have been some confusion about the Gad Hill station, near Chatham. There are two Gad Hills, and the map seems to require two Gad Hill stations. The Torbay branch, the Shoeburyness line, and the Irish line, were not under Roebuck.

On May 8th, 1809, the Governor of Jersey and the Duke de Bouillon were corresponding about a two arm semaphore system of 56 signs, for use between the islands of Jersey, Guernsey, Alderney and Sark. (W.O., 1. 925).

THE COAST SIGNAL STATIONS.

These stations seem to have been first permanently established in 1795. (Digest, 66, 67). They were paid off at the peace and re-established when the war broke out again. Admiralty to Navy Board (147, Minutes, May 17th, 1803), "We do hereby desire and direct you to make immediate application to the owners of the land on which the signal posts are erected for permission to re-establish them, and you are to take the earliest means in your power to put them into a proper state for service, and to prepare the signals with as little delay as possible. —T. TROUBRIDGE, J. MARKHAM." ("To go directly.")

J. A. Gardner (N.R.S. "Recollections," p. 263) says that the signal stations were closed on December 7th, 1814. Gardner was in command of the station at Fairlight from 1806 to 1814, and in his "Recollections" gives some account of the nature of the service.

When the Sea Fencibles were established, the signal stations were, on March 15th, 1798, placed under the district captains, as is shown by Article 18 of the Instructions for Sea Fencibles

(Adm. Sec., Out Letters, 135); and the same thing was done on July 4th, 1803, when the Sea Fencibles were re-established.

The signal stations at Brixton (Torbay) and New Romney (East Bay, Dungeness) had standing orders to report all arrivals and departures direct to the Admiralty; which they did by means of coast signal stations and the telegraphs, as well as by a daily letter, when any large number of vessels moved.

Lists of the 81 coast signal stations erected in Ireland in 1805-06 are in Adm. Sec. In Letters, 643. Of these stations only 24 were manned before Trafalgar.

A copy of the orders and instructions for coast signal stations, and a list of those established in May, 1803, is to be found in Orders and Instructions, 145.

Seven extra signal stations were established between Liverpool and Holyhead at the request of the military. (150 Minutes, May 8th, 1804). It would appear that they were at some later time altered to a telegraph system.

The Mr. Goodhew mentioned above was the inventor of a system of flag signalling very similar to Popham's telegraphic code; in fact, Popham and Goodhew appear to have worked together for some time in 1805 at the Downs. This system was ordered to be tried, Lord Keith's acknowledgment of the Admiralty order being dated November 1st, 1804. (Adm. Sec. In Letters, 544). After trying them in the *Monarch*, *Pomone*, and *Diomedé*, Lord Keith reported favourably on them on April 27th, 1805. (*Ibid.* 550). The *Pomone* and *Diomedé* were sent off the Texel, and the Texel Fleet tried the Goodhew code. Goodhew also had a terminal station working on board the rope-making hulk at Spithead, under the orders of the Portsmouth flag lieutenant. (In Letters, 1083, 18th August, 1805), Popham's code was adopted by the Admiralty and issued first, on September 3rd, 1805, to Capt. Lobb, of the *Pomone* (154, Minutes), who was just off to his cruising station on the Portuguese coast. Thus when Rear Admiral Russell, of the Texel Squadron, sent in, on October 6th, 1805, his own code of signals to be printed he was informed by the Admiralty that "a vocabulary of signals is already in use in the Navy," and that a copy of it would be sent to him in a short time. (In Letters, 549).

There is a manuscript of Goodhew's signals at the Royal United Service Institution.

The adoption of Goodhew's system between Portsmouth and Plymouth would seem to have been intended as a return to him for services rendered; but an additional reason was that the Admiralty desired to have Popham's Code kept out of the hands of the shore stations and confined to the service afloat. In any case Goodhew's Coastwise system would appear to have been only a temporary expedient. The squabble about Roebuck's private code and his authority over the telegraphs

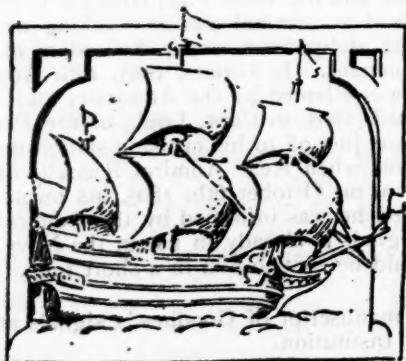
was very likely at the bottom of the matter, but it would seem to have been the completion of the Portsmouth to Plymouth telegraph line which finally killed Goodhew's Coastwise system. On 23rd December, 1805, the C. in C. at Portsmouth used Goodhew's telegraph (In letters, 1807):

12 h. 10 m. (up): "The Channel Fleet is arrived in Torbay."

1 h. 20 m. (up): "I have sent notice of the sailing of the Brest Fleet to the Westward by Coast Signals."

This is probably the first occasion on which any telegraph was used for strategical purposes to a sea-going fleet to the West of Portsmouth.

NOTE.—The first occasion I have traced of the ordinary coast signal stations being used for strategical purposes, is on 25/2/1797 (Out Letters, 1099), when Bridport's Fleet was at Spithead, and a squadron of frigates under Pellew was sent to watch Brest, and report by means of the coast signal stations, if the enemy's fleet moved; Pellew was called away to attend to the French frigates off Fisguard, and on 30/3/1797 (ibid) Sir J. B. Warren's squadron of frigates took over the duty with similar orders. —R.H.



REORGANIZATION OF THE RUSSIAN ARMY.

(Anonymous).

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IN an article which appeared in the *Revue de Paris* about two years ago¹ the more important particulars of the task undertaken by General Sukhomlinoff, the new War Minister, were pointed out. The *Novoe Vremya* stated that the chief points of the new programme would consist in the reorganization of the recruiting service, in the mobilization, and fresh distribution of the troops, in improving their preparation for war, in perfecting the *materiel* at their disposal, and in bringing the indispensable fortresses up-to-date.

The deliberations, which were commenced immediately after the war in Manchuria, resulted in a complete revision of the whole military organization. This revision was prepared in exceptional secrecy until its completion. It naturally created some stir in Europe. The press, and even some military writers, made deductions which were perhaps premature. In France some well-meaning people cried out that the French were being abandoned; in Germany some rejoiced to see the Dual Alliance abandon its "aggressive point" in Poland.

What is the exact nature of this reorganization of the Russian Army? What is its effect on the military power of Russia on her European frontier? We can only answer these questions by a careful examination of the facts² and their immediate results.

The Old Reserve Battalions.

The distribution of active troops in the Empire had led the

(1) 1st August, 1909, "L'Armée russe"—an article which should be referred to for any questions of the general organization of the Russian Army, which it has not been possible to include in the present study.

(2) Principal works consulted:—"Stations of the troops of the Land Army" published monthly by the Russian War Office. The *Invalide Russe*, the official military periodical, *Revue Militaire des Armées Etrangères*, published by the 2nd bureau of the French Army Head Quarter Staff (December, 1910). The Quarterly Journal, published by the Prussian General Staff (1st number for 1911), v. Carlowitz-Maxen. Stations and Distribution in the Russian Army (Berlin, November, 1910), as also the previous editions of this little work.

Russian authorities to create special units, in time of peace, organized like the corresponding infantry and artillery units of the active army, but having as their only function, the incorporation of the reservists of the district where they were stationed, so as to form them into reserve units. In 1908 the Russian Army contained, on a peace footing, 176 reserve battalions, which, when mobilized, became at least 571 battalions, or 34 divisions of Reserve Infantry. As only one-eighth of the establishment of these units consisted of active troops they could in any case, only constitute second line troops. Their unjustifiable employment in the first line during the Manchurian war gave rise to regrettable incidents. The fact that General Orloff's Reserve Division gave way at the battle of Liao-Yang has been considered one of the causes of the loss of that battle. As soon as the war was over it was decided to supersede this system.

The development of the railways during the last twelve years, added to the changes in the distribution of troops through the country, now enabled the Russian authorities to handle the question of second-line units under conditions resembling those which obtain among the Western Powers. The duty of mobilizing the reserve units was now allotted to the active troops in a given district, so that it became unnecessary to keep up, in time of peace, units specially detailed for this task. It followed that the units could be transformed into active troops properly so called.

Similar considerations prevailed with regard to some other cadres known as "fortress troops"; their mobilization arrangements were similar to those of the reserve troops, but they had the additional disadvantage of being allotted to a particular place, and they thus immobilized a considerable number of troops.

The transformation of these cadre units, as they stood, into active units, would, at first sight, have been very attractive, but it was necessary at the same time, to increase the establishment of the active troops so as to enable them to absorb the reservists which they would have to mobilize. Out of the 232 reserve or fortress battalions which have been suppressed, 174 new active battalions have been formed, of which there are 91 in Europe, 40 in Caucasia, 11 in Turkestan and 32 in Siberia¹.

(1) An experiment in this sort of transformation was attempted in 1909, when 16 reserve battalions and 12 fortress battalions were turned into 32 active battalions, in order to raise the two new Divisions stationed in Trans-Caucasia. In order to avoid confusion, and to leave the new system all its fulness, the figures relating to the old organization all refer to the year 1908.

In the figures given below, and in general throughout this memorandum, the two battalions of the Imperial escort and the troops detailed as railway guards in Manchuria who are referred to below (see page 1457) are not included.

New Organization of the Infantry.

The Russian infantry, therefore, now consists of 1258 battalions¹, of which 952 are quartered in Europe, and North of the Caucasus. These alterations in the infantry naturally found their echo in other arms. The reserve troops of the artillery and engineers batteries, parks and other units), have been suppressed. The *personnel* which supplied them has served to make new units corresponding to the new formations of the infantry,² and to strengthen existing units. Those artillery and engineer units, however, which are assigned to the garrisons of fortresses have not undergone any transformation worth mentioning.

Changes in Artillery and Engineer Organization.

To the above changes there have been added important alterations in the interior organization of the specialist branches and in their distribution in the larger infantry formations. The experiences of the war in Manchuria had drawn attention to the need of a weapon for the artillery which should be more powerful than the existing field gun, and more effective against

(1) Summary of the distribution of Russian active troops (October, 1910). [The numbers placed in brackets refer to the 1st October, 1908.]

Military District and Army Corps. Battalions. Squadrons. Batteries.

St. Petersburg (Guard I., XVIII., XXII.)	144 (117)	64 (64)	67 (55)
Vilna (II., III., IV., XX.) ...	136 (168)	60 (60)	66 (63)
Warsaw (VI., XIV., XV., XIX., XXIII.)	160 (192)	182 (218)	86 (97)
Kieff (IX., X., XI., XII., XXI.) ...	168 (168)	118 (118)	92 (89)
Odessa (VII., VIII.)	72 (72)	36 (36)	33 (33)
Moscow (Grenadiers, V., XIII., XVII., XXV.)	160 (112)	49 (37)	78 (53)
Kazan and the Don (XVI., XXIV.)	80 (6)	33 (7)	36 (0)
<hr/>			
European Russia	920 (829)	542 (540)	458 (420)
Caucasia { Ciscaucasia (III. Cauc.)	32 (20)	20 (20)	16 (10)
{ Transcaucasia (I., II. Cauc.)	86 (58)	72 (72)	38 (23)
Turkestan (I. and II. Turkestan) ...	44 (33)	50 (46)	20 (14)
Siberia (I., II., III., IV., V. Sibrn.)	176 (144)	43 (45)	104 (80)
<hr/>			
Grand Total	1258 (1084)	727 (727)	636 (547)

Note.—On the Manchurian Railway
(attached to the Frontier
Guards)

24 (14) 36 (55) 4 (6)

(2) The number of active Field Artillery Batteries of all kinds has been raised from 547 to 636 (not including 2 depôt batteries of horse artillery and 19 Cossack cadre batteries), an increase of 89 batteries. The active companies of engineers of all categories have been raised from 229 to 253—an increase of 24 companies.

material objectives. Each army corps has been provided with a group of quick-firing field-howitzers, consisting of two batteries of 6 guns each. Each infantry division has at its disposal an artillery brigade of 6 batteries of 8 quick-firing guns each; a Russian army corps (32 battalions) has at its disposal in all 108 quick-firing guns. Besides this, 7 groups (3 batteries of 6 guns) of heavy field artillery, armed with a 6-inch quick-firing howitzer have been called into being. The divisional artillery is now attached to the infantry divisions in peace as well as in war. The Generals who used to command the artillery of each army corps now only carry out the technical inspection of this arm.

A similar alteration has been carried out in the distribution of the engineers, who were formerly organized in brigades by military districts. They are now placed under the commander of their army corps, and are quartered in the army corps area.

Improvements in Technical Equipment.

From a technical point of view the two last years seem to have been particularly satisfactory for the Russian Army. The large credits voted by the Duma have made it possible not only to replace the stores expended in Manchuria, but also to achieve considerable progress, as for instance, the rearmament of the field artillery with quick-firing guns and howitzers, the renewal of the siege and fortress stores, the issue of an improved pattern equipment, and of a grey-green service uniform (of a colour known as "protective") to the troops; the increase of the number of portable tools for the infantry; and the organization of aeronautics and aviation in the army. With regard to the latter, in the autumn of 1911 the army will have at its disposal 9 dirigibles and 30 aeroplanes.¹ The aviation week which took place in October last was a brilliant success. The results obtained last winter at Sevastopol show an even more noteworthy progress.

Recruiting Districts.

The Russian authorities have always taken great pains to maintain the national character of their troops. Each unit contains three-quarters Russian and one-quarter non-Russian elements, who come from districts other than that in which the unit is quartered.² Similar rules, perhaps not so strict, are applied to the reservists who have to bring the troops up

(¹) This number appears to be rather under estimated.—ED. R.U.S.I.

(²) Before 1910 the 10 infantry divisions quartered in the Warsaw District drew their recruits as follows:—5 divisions from the Moscow District, 4 from Kieff, and 1 from Kazan.

Similarly, of the 10 divisions in the Vilna District, only 4 drew their recruits from that district itself; the 6 others drew their recruits, 2 from Kazan, 3 from Moscow, and 1 from Kieff (*V. Carlowitz-Maxen*).

to their war strength. Some curious complications resulted on the transition from peace to war footing of units stationed in non-Russian districts.

In Poland, especially, this system was peculiarly inconvenient. In addition to the reservists required to place the active troops in this country on a war footing, it was necessary to bring from the interior the large personnel required for the fortresses. In the case of the infantry alone the transition from a peace to a war footing and the doubling of 31 fortress battalions and 32 reserve battalions made it necessary to transport more than 100,000 men from the interior districts. It is not necessary to insist on the disadvantages of a system which necessitated the transport of such masses of individuals.¹ The improvement of railway communication was bound to lead to the adoption of a system resembling as nearly as possible the territorial system in use among the military powers of Western Europe.

Distribution of the Army before 1904.

The distribution of the Russian Army in the European territory of the Empire has not been appreciably altered since 1896; its 21 army corps (Guards, Grenadiers, Corps I. to XIX.²) were all stationed West of Moscow, along the Western frontier or in its neighbourhood, with the exception of three corps quartered in the neighbourhood of Moscow. This distribution was justified by the paucity of railway communication and by the absence of any serious adversary to the East of the Empire. The creation of the XX. and XXI. Army Corps at Riga³ and Kieff in 1899 did not modify the general scheme of distribution of troops, as the above reasons were still valid. Up till 1904 any alterations which took place (with the exception of the increase of the Russian rifle-battalions quartered in Finland and the progressive reduction of Finnish troops), chiefly affected the troops in Asia; but the unexpected events of the Russo-Japanese War showed that the measures adopted even in this quarter had been inadequate.

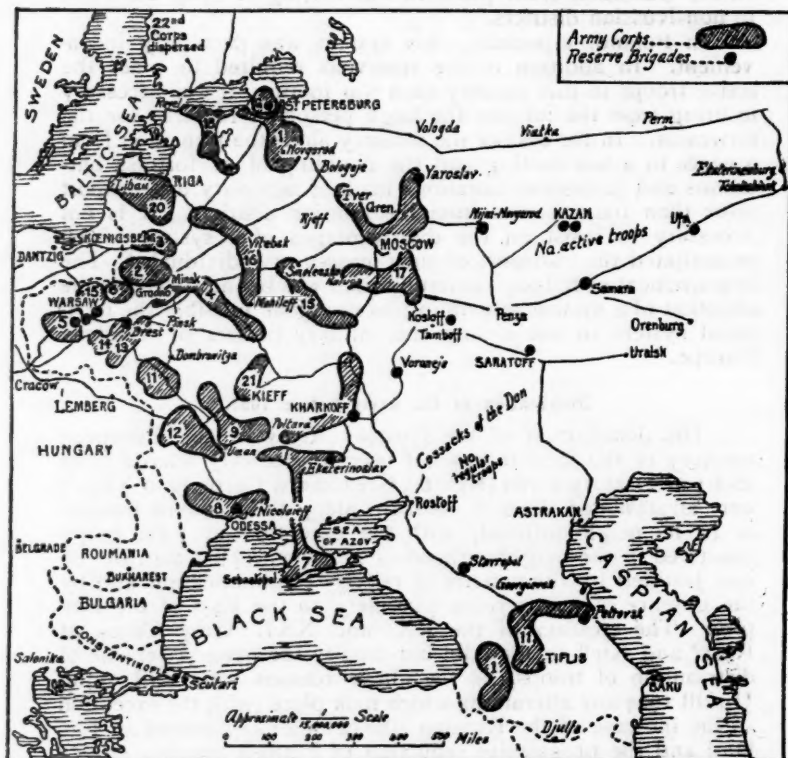
The Official History of the Russo-Japanese War, published by the Russian General Staff⁴, shows clearly all the steps which were taken, in order to obtain the necessary numbers in a theatre of war more than 5,000 miles distant before drawing on the troops in Europe. Circumstances rendered this last consideration of great importance; it would have been a confession of

(1) This may be compared with the transport of reservists to join the French army in July–August, 1870.

(2) Comprising in all 780 active battalions quartered in Europe and Ciscaucasia, and 121 in Transcaucasia and Asia.

(3) An increase of 64 active battalions in Europe.

(4) The first four volumes of the French translation of this work have been published already (Paris, Chapelot).

The Russian Army BEFORE the Reforms of 1910.¹

impotence to denude the Western Frontier. It was, therefore, only possible to despatch active army corps to Manchuria at intervals and in limited numbers.² The only alternative was to send Reserve Divisions, and these lacked the cohesion and enthusiasm requisite for their employment in the first line.

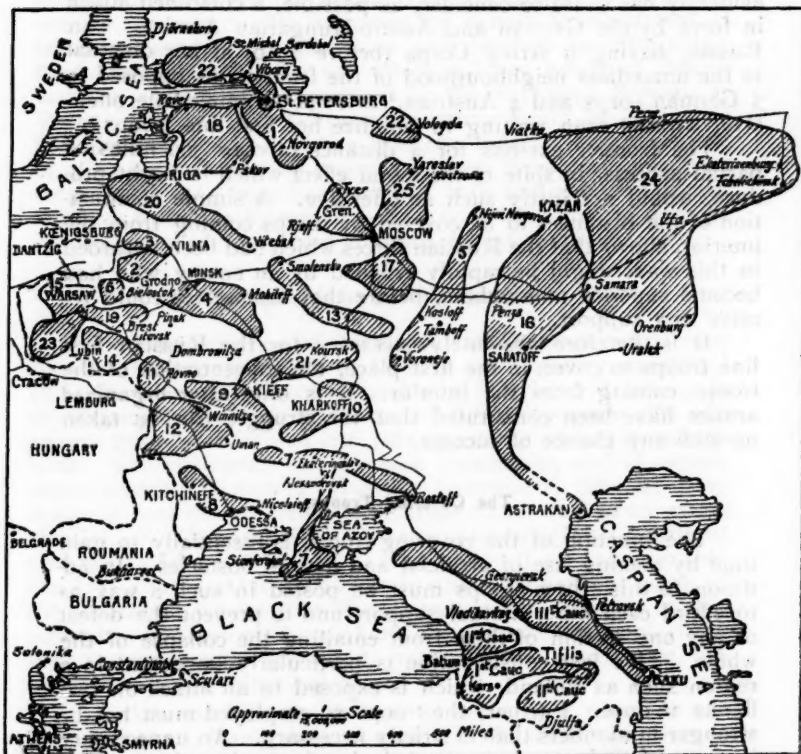
Principles of the New Distribution.

The want of available troops quartered in the centre of the Empire and capable of being transported to any one of its boundaries had been bitterly felt. Later, the reform of the Turkish Army resulting from the military revolution in Constantinople, the complications of the Persian revolution, and the

(1) Redrawn and reduced from the map in the original article.

(2) The X., XVII., and I. Corps arrived before Liao Yang. Then the VIII. and XVI. The IV. IX., and XIX. Corps only arrived after Mukden.

The Russian Army AFTER the Reforms of 1910¹



revival of the power of China, showed still more clearly the need of having a central reserve available. While the troops, in each of the frontier districts must be given the numerical strength necessary to enable them to offer serious opposition to the probable enemy, the support of this central reserve should enable them to pass to an energetic offensive in the district concerned.

To recapitulate,—the strictest possible application of the territorial system, both in recruiting and mobilization, the creation of a central mass able to bring an overwhelming superiority to bear in the chief theatre of war—these are the principles which seem, since 1906, to have guided the deliberations and decisions of the higher military authorities in Russia.

Strategic Considerations on the Western Frontier.

For the French reader these considerations appear to deserve a careful examination, more especially in so far as they

affect the action of Russia on her Western Frontier¹. Russia evidently has cause to consider, as possible, a combined attack in force by the German and Austro-Hungarian Armies. Can Russia, having 9 Army Corps (before 1910) at her disposal in the immediate neighbourhood of the frontier, as opposed to 5 German corps and 4 Austrian,³ attempt an immediate offensive, without even waiting to mobilize her first line troops?

The frontier extends for a distance of over 500 miles; a partial success, in spite of the moral effect which it might produce, would not justify such an offensive. A simple computation of the distances to be covered by troops coming from the interior, shows that the Russian forces which had been hazarded in this way, might be rapidly crushed by an enemy who had become superior in numbers, before they themselves could receive any support.

It is therefore absolutely necessary for the Russian first line troops to cover, in the first place, the concentration of the troops coming from the interior. It is only after *organized* armies have been constituted that the struggle can be taken up with any chance of success.

The Covering Troops.

The function of the covering troops is essentially to gain time by making use of artificial and natural obstacles. In addition to this, these troops must be posted in such a way as to afford each other mutual support and to prevent the defeat of any one section of them from entailing the collapse of the whole. This last consideration is particularly important in a region such as Poland, which is exposed to an attack on two flanks at once. Further, the troops so employed must not be stronger in numbers than is strictly necessary. An unnecessary increase of their numbers can only be obtained at the expense of the mobile masses, which alone will be able to fight a decisive battle. In a country such as Russia, where distances are great, the whole establishment of the covering troops must be complete in time of peace, calculations being based on the most unfavourable hypothesis, while maintaining, however, sufficient elasticity in the scheme adopted to enable advantage to be taken of more favourable hypotheses.

(1) Cf. the studies on this subject which have lately been published in the *Revue Militaire Générale*, conducted by General Langlois (Berger-Levrault).

(2) GERMANY.			AUSTRIA.		
I. Army Corps ...	Königsberg.		I. Army Corps ...	Cracow.	
XVII. " " ...	Danzig.		X. " " ...	Przemysl.	
II. " " ...	Stettin.		XI. " " ...	Lemberg.	
V. " " ...	Posen.		VI. " " ...	Kaschau.	
VI. " " ...	Breslau.				

The case in which Russia alone might be opposed to the united forces of Germany and Austria-Hungary may be left out of account. No sane-minded person would dream of leaving Russia to struggle alone with her two powerful neighbours, without throwing the whole military power of France into the scale. The destruction of the European Balance of Power in favour of a German hegemony would be equivalent to suicide on the part of the Western Powers. All questions of alliances and *ententes* apart, a general European War must seem, for a long time to come, the only probable hypothesis. Starting from this assumption, let us see what are the possible consequences of the recent military reorganization?

Consequences of the Reorganization.

The transformation of the reserve and fortress cadre-troops has enabled the Russians to form 9 new infantry divisions¹ (5 in Europe, 2 in Caucasia, and 2 in Siberia) and a brigade of riflemen in Finland; moreover, all the independent rifle battalions have been formed into rifle regiments of two battalions each. The utilization of these new formations, and of certain supernumerary divisions (Guards, Grenadiers, Siberia) have made it possible to create in Europe three new army corps (XXIII., XXIV., and XXV.), one in Caucasia (III. Caucasian) and two in Siberia (IV. and V. Siberian). If we note also that the III. Caucasian Army Corps is quartered entirely north of the Caucasus, we see that Russia has at her disposal, at this moment, on European soil,² 28 army corps, as against 24 which she formerly possessed, being a total increase of 103 battalions. (952 instead of 849).

At the same time the defence of her distant frontiers has been reorganized and strengthened. In Caucasia an increase of 40 battalions has made possible the formation of the III. Army Corps in Ciscaucasia, leaving, at the same time, south of the mountains, two complete army corps which have 28 active battalions more than they had in 1908. In Turkestan the two existing army corps now number, with their 6 brigades of rifles, 48 active battalions instead of 33.

In Siberia we find—going from East to West—in the Amur district 3 army corps with an increased establishment, well equipped, concentrated at Vladivostock, and to the north of that place; behind them in the Irkutsk District, 2 army corps quartered on either side of the Lake Baikal; finally the Omsk District has one infantry division, the nucleus of the army corps which will no doubt be formed there when this rich re-

(1) 2 of these divisions, quartered in the Caucasus, were constituted in 1909 (see above).

(2) Including Ciscaucasia.

gion has been sufficiently colonized.¹ Among the Siberian troops must, besides, be included the troops guarding the railways in Manchuria (24 battalions, 36 squadrons, 4 batteries, 25 engineer companies.)²

The Central Mass.³

The security of the Asiatic frontiers having been thus provided for, under conditions which are a great advance on those previously existing, the Russian authorities proceeded to organize the central mass. The country between the Volga and the Kama—the Kazan military district (in which lie the starting points of the Trans Siberian and Trans Caspian railways)—is connected with the West of the Empire by more than six railways (of which three are at least twelve years old). Up to the present this region only contained reserve cadres. In the new distribution of troops it is allotted two army corps, the XXIV. (3 new divisions), and the XVI. from Vitebsk (Vilna district).

In the Moscow region, situated at the crossing of the main lines of railway, the Russian population, properly so called, attains its greatest density. This district is to receive one of the new divisions which, with the 3rd Grenadier Division, forms the XXV. Corps, and is to be allotted also the V. Corps, previously quartered on the left bank of the Vistula, but now extended from Voronety to Nijni-Novgorod.

Interior Communications.

The Russian army thus has at its disposal as a central mass, seven army corps (instead of three). The transport of this mass from east to west is provided for by at least six railway lines, of which three come from the Ural and the Caspian. Railway communications have been considerably improved during the last fifteen years. Besides the doubling of existing lines four great transverse lines—each more than 700 miles in length—have been built. Perm is in direct communi-

(1) With reference to this subject see the translation published in the supplement to *L'Information*, 11th March, 1911, of a memorandum written by M. Stolypin, on his return from his journey to Siberia in 1910. The second part of this memorandum relating to the colonization of the Volga, contains very interesting information on the changes introduced into the agrarian organization of European Russia. Individual ownership is being gradually substituted for the ancient indivisibility of the village land (*The Mir*). This individual ownership is not only assented to, but demanded with enthusiasm by the peasant population, and is likely to have incalculable consequences in the evolution of the Russian peasant, who, it must not be forgotten, constitutes almost entirely the mass of the Russian Army.

(2) The Treaty of Portsmouth gave Russia the right to keep a guard of 15 men per verst of railway in Manchuria, which, for the 1610 versts of the Manchurian line, gives 24,150 men. The troops allotted to this duty do not belong to the active army properly so-called, and are attached to the Corps of Frontier Guards (Ministry of Finance).

(3) It will be seen from what follows that the word "Central" is used with reference to *European* Russia.—Ed. R.U.S.I.

cation with St. Petersburg (1906); the line from Bologne to Siedlets (1906) joins Kostroma (on the Volga) to the heart of Poland; the lines from Moscow to Windau (1901) and Moscow to Briansk (1899), with their branches and prolongations make a useful alternative to the direct line from Moscow to Warsaw. The Tsaritsyn-Poltava-Kieff-Kovel line (1902) and the Astrakhan-Saratoff line (1909) with its prolongation to Kosloff and Smolensko (1899), will make it possible to transport to Poland the troops, and especially the numerous Cossack cavalry from the Don and Volga region.

In order to form this central mass of troops, the Russian authorities have laid hands on two army corps formerly stationed in the west of the empire. Public opinion was inclined to read into this withdrawal of troops stationed on the German frontier profound modifications in the intentions of the Russian General Staff. They were even accused of abandoning the policy hitherto followed. Of the two corps thus removed to the interior one, the XVI., was stationed in the Vilna district which is more than 250 miles from the German frontier. Its removal of course entails a longer movement by rail, but the days thus lost will be compensated for by the greater ease of mobilization in the army corps' own territorial district.

The V. Corps was quartered in the Warsaw District on the left bank of the Vistula. Occupying, as it did, a salient angle, and separated from the rest of the army by the Vistula—a considerable obstacle—its mobilization was precarious. Its strategic position was no better. It could be attacked in front by the two German corps from Posen and Breslau, and in flank by the Austrian corps from Cracow. It was thus exposed to a serious defeat without even having been of any use. Its best chance lay in withdrawing on the Vistula without fighting. Its place has now been taken in this district by two brigades of rifles—light troops, who are easily mobilized, and are more suitable to act as covering troops in a district comprising (from Thorn to the junction of the San and the Vistula) 350 miles of frontier and having a depth of 150 miles from Kalich to Warsaw.

When these two brigades of rifles had been incorporated in a division, and when the 3rd Division of the Guards had been allotted to an army corps, it became possible to organize the XXIII. Army Corps from the units already quartered in the district. Some exchanges have taken place between the XIV. and XIX. Corps, which, formerly, both faced Austrian Galicia (having their leading divisions at Kholm and Lublin), and this has made it possible to allot one corps only, the XIV., to the defence of this frontier, the XIX. being distributed between Brest-Litovsk and Warsaw.

The New and Old Distributions Compared.

If we compare the distribution of Russian troops before and after the reorganization, we find :—

Before the reorganization: in Lithuania, in the first line two corps (III. and II., Vilna and Grodna); in the second line two corps (XX., Riga, and IV., Minsk); in the third line one corps (XVI., Vitebsk).

In Poland, in the first line, three corps and a half (VI., XV., V., and rifles), in the second line one division (the Guards). This gives a total of $5\frac{1}{2}$ corps in the first line, $2\frac{1}{2}$ in the second line, and 1 in the third line.

The present organization shows: in the first line five corps (III., II., VI., XV., XXIII.); in the second line three corps (XX., IV., and XIX.).

The abolition of the units formerly known as reserve and fortress troops has thrown upon some of these corps the duty of defending the fortresses, but only till the time comes for assuming the offensive, or, at the worst, up to the arrival of the real reserve troops, whose transport in organized units is a much more certain affair than the transport of the innumerable unorganized reservists, who had to be despatched for this duty, under the previous scheme, from the provinces in the interior. In either case the army has under its hand, in the first or second line, eight army corps to oppose to the German Army.

The Possibility of an Immediate Offensive.

Is an immediate offensive possible with these forces?

From the Niemen to Silesia the Russo-German frontier extends for nearly 500 miles. A general defence along such an extensive front would be out of the question. For effective action it is necessary to concentrate one's forces; but this requires an appreciable time. The German troops, occupying difficult country which has been prepared in advance for defence (such as the neighbourhood of the lakes of Mazovia), would only give way before a considerable numerical superiority. Besides, Germany would not be alone in the struggle. The Austrian troops massed in Galicia might take the line of the Vistula in reverse and attack the Russian armies in rear. The latter are therefore compelled, before all things, to secure their left flank and must also largely reinforce their three corps (XIV., XI., XII.) in that quarter; that is to say, they must wait until the troops in the Kieff district have completed their mobilization and have been brought up to the front.

An *immediate* offensive therefore does not seem possible; but, on the other hand, the new organization does allow the idea of a *comparatively rapid* offensive to be entertained.

Again, the time required to offer an effective resistance to one or other of the allied armies is sufficient to allow for the transport of the corps from the interior. Russia will, therefore, be able to act on the offensive in whichever of the chief theatres of war she may choose, and in whatever direction she pleases, under conditions, as regards time and numbers, which

are far more advantageous than those which have hitherto been possible.

The Command of the Baltic.

Two other questions, though of less importance, have latterly occupied public attention. The first of these concerns the defence of the Baltic; the second the dismantling of the Polish fortresses.

Can Russia, having lost the command of the sea, defend the coasts of the Baltic, and, especially, of the Gulf of Finland? It is certain that if Russia were *fighting alone*, she would, from this very circumstance, be vulnerable along her whole western frontier, both by land and by sea, from the Gulf of Bothnia to the mouths of the Danube. The menace of a hostile fleet, in almost unchallenged command of the Baltic, and the possibility of a disembarkation threatening the very capital of the Empire would become, therefore, practical hypotheses.

We have seen that the necessity for maintaining the Balance of Power against the supremacy of the Central European Powers excluded the assumption that Russia would fight alone; and, similarly, that it excluded the assumption that Russia might remain an inactive spectator of a struggle limited to Western Europe.

Assuming, then, a general war, as the only hypothesis, the probable danger in the Baltic is reduced to that of a simple naval demonstration. The capital has been protected from all possibility of insult by the steps which have been taken for the defence of the Gulf of Finland and by the fact that a third brigade of rifles and an infantry division have been allotted to the XXII. Corps.

The Polish Fortresses.

As regards the dismantling of the Polish fortresses it is necessary to insist on the fact that no official steps have been taken and that all these places have retained, under the new organization, the whole of the artillery and engineer units which they had disposed of formerly.

If we refer to a very complete article published in October, 1908, in the *Internationale Revue über Armeen und Flotten* we see that most of these fortresses are old, going back more than thirty years. Their outer lines of works are "too near the central fortress" (Ivangorod about $1\frac{1}{2}$ to $2\frac{1}{2}$ miles) and "their construction does not take account of the effect produced by the projectiles of modern large-calibre guns" (Warsaw, etc). Their general system and organization date from the time when Russia had only 17 army corps in Europe (instead of 28), and when the want of railway communication and the slowness of her mobilization arrangements compelled her to prolong enormously the period of defence by the covering troops. The same reasons compelled her to collect on the spot immense quantities of supplies, resembling the magazines of

armies in the old days. These supplies had to be protected from a *coup de main*.

In consequence of the continual increase in the numbers of the Russian troops and of the improvements in the railway system, the rôle of these fortresses has diminished in importance, whilst the possibility of the offensive increased. Strategy now only asks of them that they should afford temporary support, either during the period of concentration, or during the period of operations in the field, in case the enemy assumes the offensive and compels the Russians to fight on their own soil. The covering troops require fortified *points d'appui* if their line of resistance is close to the frontier, or if the points of concentration which require to be covered, are so close behind them as to deprive them of all space for manœuvring. Important fortresses close to the frontier can, if favourably situated, be of great assistance to an offensive movement. If situated further back they may serve to shelter great dépôts of supplies and facilitate the retreat of beaten troops. But fortresses absorb considerable resources both of men and matériel; their use, therefore, should be limited to those points where they appear to be indispensable.

Three Groups of Fortresses.

According to the German article quoted above, the fortresses and works on the Russian frontier can be divided into three groups.

On the Niemen, the Bobr and the Narev, less than 60 miles from the Prussian frontier, there is a whole series of fortresses and works amongst which we may quote the following:—

The first-class fortress of Kovno at the junction of the Niemen and the Vilia; the works of Ossovetz on the Bobe; those of Lomja on the Narev; and lastly, the first-class fortress of Novo-Georgievsk (the Modlin of Napoleonic times) at the junction of the Narev and the Vistula. This fortress, commanding both streams, constitutes an excellent strategical pivot and permits the Russians to advance along either bank of the Vistula; as it is situated down-stream from Warsaw it covers the latter from any attempt from the north-west.

On the middle Vistula, 125 miles from the German frontier, are the two fortresses of Warsaw and Ivangorod; they were constructed at a time when Russia might have expected to see the whole of Western Poland invaded by hostile armies before she was in a position to prevent it. They were therefore intended, together with the works on the Narev and the fortress of Brest-Litovsk, to form a sort of immense entrenched camp, which should make it possible to await the arrival of troops from the interior.

Nowadays these fortresses, Ivangorod in particular, are no longer so strong as formerly; situated, as they are, a week's march from the frontier of Posnania, they have lost much of

their strategical importance. The increase of the Austrian military power on the Galician slope of the Carpathians allows the course of the Vistula to be turned without a blow, and only leaves the fortress of Ivangorod a very secondary rôle.

This is not the case with Brest-Litovsk, situated on the Bug, at the eastern extremity of the Pinsk district, which is swampy and difficult to cross. Its geographical position and the importance of the railways meeting there indicate it as a *reduit* in the defence of Poland and as a support in a counter offensive attack which might follow on repeated checks in Poland.

The old works in Volhynia and Podolia, though all more or less obsolete, offer, nevertheless, *points d'appui* which could be used in case of need by the covering troops.

This brief study of the fortresses of Poland and of the part they might play is sufficient to show us that the question of the construction, upkeep, or abandonment of some of these places is intimately connected with the part assigned to them by strategy in the counter play of the field armies, the only forces—it cannot be too often repeated—which control the destinies of war. To say that the abandonment of two fortresses on the Vistula¹ implies the abandonment of ten provinces in Poland is almost equivalent to contemplating their cession in peace in order to have the pleasure of re-conquering them later.

In any case no steps have yet been taken with regard to declaring certain fortresses in Poland obsolete. Even the dismantling of some of them would only justify us in drawing one conclusion, viz., that the resources in personnel and matériel which they absorb are no longer in proportion to the support they may afford the field armies.

The Work of General Sukhomlinoff.

The whole of this plan of reforms was worked out immediately after the reverses in Manchuria by the combined efforts of the officers who were at the heads of the military administration and of the General Staff. But, whilst giving all credit to those who conceived and elaborated this plan, we should not forget the name of the man who had the honour and merit of putting it into effect. General Sukhomlinoff, who was Chief of the General Staff in 1908 and has been Minister of War since 1909, has displayed indefatigable activity in the discharge of his heavy duties; in addition to the reforms described above he has been able to carry out the complete centralization of the military administration. The different heads of departments, hitherto almost independent, the different committees, the inspectorates-general have been reorganized and placed under the effective command of the Minister for War who alone is responsible.²

(1) In truth the press has only referred to the dismantling of Warsaw and Ivangorod.

(2) See *Revue Militaire des Armées Etrangères*, March, 1911.

Some branches, such as the Intendance branch, have been completely re-cast in consequence of the numerous defalcations exposed in the Manchurian War. As regards the troops, the improvements in the position of the non-commissioned officers, the increase of their number (which has been raised from 3 to 6 per unit) gives hopes of an improvement in the quality of the permanent cadres. The raising of the standard of education required from candidates for commissioned rank has made it possible to obtain a supply of officers of uniform quality and to improve the quality of the subaltern ranks. The improvements in the position of regimental officers, which have now been sanctioned, have helped to diminish the shortage which had been so disquieting of late years.

The creation of second-colonels¹ in regiments gives to the officers of the line (in contra-distinction to those of the Guard, the Staff, and Departmental Corps) that share in promotion to the higher ranks which is their due.

The limitation of the age for promotion to the different ranks, together with the steps taken for lowering the age limit in the different grades, gives hopes of seeing younger men in high command.² The average age of commanders of army corps is fifty-eight and three months; that of divisional generals in the infantry is fifty-five and four months, and in the cavalry fifty-four and seven months.

The Doctrine of the Offensive.

The efforts which have been made to found a military tradition based on the doctrine of the offensive are taking shape and increasing.³

The transformation of the Nicholas Staff Academy into a school of higher military study, under the name of the Imperial Academy of War, is characteristic. The tendency of its teaching, which formerly was so dogmatic and abstract, is being modified; increased importance is being given to the study of concrete instances. Modern Russian military literature endeavours to saturate officers with new ideas—or, rather, with old ideas which have been forgotten but are still true—

(1) They fulfil the duties which in France devolve on lieutenant-colonels. It will be remembered that, as the Russian military hierarchy does not include the rank of battalion-commandant, the battalion is commanded by lieutenant-colonels (*pod polkovnik*, literally, under-colonel).

(2) The Imperial rescript of the 26th January, 1910, fixes two maximum limits of age, one for promotion to the office, and the other for the termination of duty on the active list, viz., command of an army corps, 64 and 67; of an infantry division, 60 and 63; of a cavalry division, 58 and 61; command of a brigade or chief of the staff to a district, 57 and 60; colonel, 55 and 58 (see *Revue Militaire des Armées Etrangères*, March, 1910). These measures, which, up to the present, have only been adopted in the Russian Army, are worth noting.

(3) "Nothing except the offensive," Suvaroff.

which constitute the philosophy common to all great commanders, and form that military "common sense" which is often easier to express in aphorisms than to put in action.¹

The two years which have just passed will count for much in the evolution of the Russian Army. The reforms which have been carried out and the increase of moral and material power which result from them have caused it to recover all that it had lost by its recent defeats. The increase of its offensive power has put it in a position to assist the general policy of Russia and to allow her to resume the position in the Concert of Europe which is her due.

Nevertheless, much still remains to be done.

Railway Policy.

In addition to the vital reforms which must shortly be carried out—such as that of the Recruiting Law (for the better utilization of the annual contingent and the increase of the reserve-cadres)—it is important to utilize the existing resources to the best advantage. In spite of all progress yet made, the railway system does not yet give the army the speed and certainty of transport at which Western nations have arrived. It would appear indispensable to allot to each army corps a double line of railway in order to make up for the length of the communications, and thereby to reduce the critical period of concentration. A similar improvement in the railways is also necessary in the interior, to facilitate the arrival of reservists at their corps.

The Russian Minister of Communications has lately submitted to his colleagues a consolidated Bill for the construction of new railways in the next few years.² The chief lines under consideration are, in order of priority of construction:—

1. Kinel (Samara)-Simbirsk-Nijni-Novgorod-Yaroslavl.
2. (Vladikavkaz) Stavropol-Kozloff.
3. Orenburg-Kazan-Vologda.
4. Viazma-Narva.
5. (Kieff) Fastoff-Rovno.

(1) We may note here, among other excellent works, the remarkable studies of General Eltchaninoff on "War and Modern Battle," "The Tactics of Siege Operations," "Active Service in the Field," etc.; those by Colonel Golovine on "Higher Military Study," and his "Introduction to a Course of General Tactics." This latter has largely contributed to disseminate in Russia a knowledge of French military methods and doctrines. It would be impossible to pass over in silence the large part that is played in the spread of military study by the society called "The Friends of Military Science," by its public discussions, its quarterly journal, and the numerous military works it publishes at a reduced cost. The study of foreign armies, previously so neglected in Russia, has given occasion for the publication of "notices," which may be considered models of their kind on the Japanese Army (Lt.-Col Romanoffski), the Austrian Army (Lt.-Col. Pototzki), the Swedish Army (Lt.-Col. Svietchin).

(2) *Invalide Russe*, 2nd March, 1911.

6. (Kaluga)-Roslaff-Bobruisk-Baranovitchi-(Bielostok).
7. Viatka-Nijni-Novgorod.
8. Orenburg-Ufa-Perm.
9. Perm-Malmych-Kostroma.
10. (Koursk)-Soudja-Mohileff-Poneviej-(Vilna).

These lines obviously represent a considerable economic value, particularly in the rich corn land of Volga-Kama.

They will also assist the movement of reservists during the period of mobilization properly so called. On the other hand the part to be played in military transport from East to West is relatively small.

Only No. 6 (Kaluga-Bielostok) will represent a new artery of transport from the Centre to the West. No. 4, although warmly defended by the *Novoe Vremya*,¹ from a military point of view only aims at the defence of the Gulf of Finland, which—as we have seen above—is already sufficiently provided for.

The distance by rail from Warsaw to Viatka to Kazan and to Vladikavkaz, is nearly 1,500 miles. In order to reduce to a minimum the period of transport, it is necessary to dispose of double lines, well laid and well equipped, with a maximum capacity for forwarding troops.

The first duty therefore, is the improvement of the railways, and especially the doubling of the lines. We may note the following as being in urgent need of a double line:—

Viatka-Vologda-St. Petersburg-Valk-Riga-Kovno.

Moscow-Rieff-Lobau.

Kostroma-Bologoe-Velikie Luki (Nevel).

Kazan-Riazan.

Saratoff-Orel and Briansk-Gomel.

Lozovaia-Poltava-Kieff-Kovel.

It is also a matter of necessity to make a considerable increase in the extensions of these lines beyond Brest-Litovsk, and especially beyond the Vistula.²

The improvement of railway communication will enable the Russian Army to carry out its concentration in conditions which resemble those of its neighbours. The cultivation of the spirit of the offensive, added to a feeling of its power, will permit it to seize and keep the initiative, a point of much importance in war.

(1) *Novoe Vremya*, 13th March, 1911.

(2) At present only three railroads cross the Vistula, two at Warsaw, and one at Ivangorod. According to the *Revue Contemporaine*, 3rd May, 1911, St. Petersburg. "The restoration of the rolling stock is still incomplete. . . The orders can no longer be postponed without incurring once more the risk of suffering losses as great as those of last year." In another article, M. de Wendrich insists on the great deficiency of locomotives "which would be especially felt in war." The large surplus of revenue in 1910 (£160,000) will no doubt make it possible shortly to improve the conditions of maintenance and working of the railways.

THE REVOLUTION IN CHINA.

(Up to the 31st of October, 1911).

The Causes of the Revolution.

ELEVEN years ago China was faced with a crisis which had many points in common with the present revolution; but at that time the genius of the Empress-Dowager was present to lead the forces of rebellion into an anti-foreign channel, which should leave the dynasty unharmed. Now the guiding hand is removed, and in its place is a child-Emperor, and a weak and vacillating Regent, while hatred of the dynasty and of the whole Manchu race has developed into a passion, the result of which may change the whole face of China, and sweep away a system of government that has lasted 2,000 years.

Throughout the long period of over two hundred and fifty years, during which the supremacy of the Manchus has been undisputed, they have never been able to assimilate themselves with the conquered race. They have remained a race apart, enjoying special privileges, and retaining their own customs. As long as each province was practically a kingdom in itself, with communications undeveloped and the press non-existent, the Chinese, whose only desire was to live in peace, were content to take things as they found them; but during the last fifteen years the improvement of communications and the phenomenal growth of the press has led the more distant provinces to take a keener interest in the affairs of the country. Increase of taxation has aroused a widespread antagonism to the dynasty, and this has been carefully fostered by a new force that has arisen, now come to be known as "Young China." Largely composed of students who have returned from abroad full of crude and visionary ideas of government, this force is still intensely patriotic, and the regeneration of their country has become a religion with them. The press and revolutionary pamphlets scattered broadcast have formed a convenient vehicle for the dissemination of their ideas. In the army, recruited as it is on a territorial basis, they realized that they had a powerful weapon against the Government, and for many years the distribution of seditious pamphlets among the troops has been sedulously carried out, with the result that the whole army is honeycombed with revolutionary sentiment. The ground has been well prepared. The distress caused by the floods which have devastated so much of Central China, has added to the general unrest; only a spark was needed to set the country ablaze, and with the decision of the government to nationalize the railways, the long pent-up feelings of the revolutionary party could be restrained no longer.

The Revolt of the Troops at Wu-ch'ang.

On the 11th October, 1911, it was announced in the London press that 28 revolutionaries had been arrested two days previously in an inn in Wu-ch'ang, a city lying opposite to Hankow, 600 miles up the Yang-tzu River. Four of the revolutionaries, it was stated, had been summarily executed in front of the Viceroy's "yamen." Mention was also made of the fact that the loyalty of the regular troops in Wu-ch'ang was not above suspicion, and that they had been indefinitely confined to barracks. The execution of suspected revolutionaries has been an event of frequent occurrence during the past year, and the disaffection among the troops of Central China is a matter of common knowledge; but there were few who were not taken aback by the suddenness with which the storm burst.

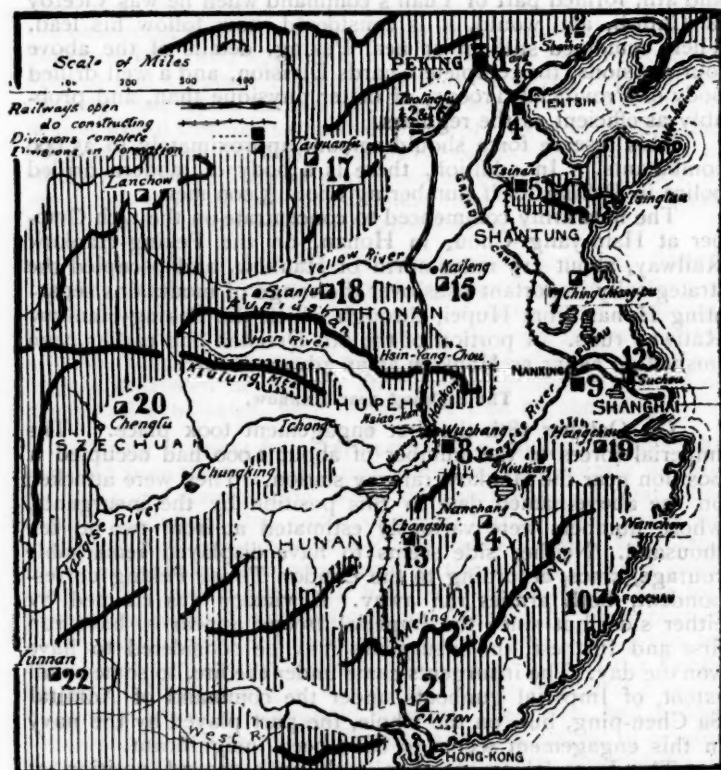
The regular garrison of Wu-ch'ang consisted of the 8th Division under the command of General Chang Piao, a Manchu, and the 21st Mixed Brigade, under General Li-Yuan-heng, a Chinese. These two units would amount approximately to 15,000 of all ranks with 72 guns. The garrison had been weakened, however, by the despatch a few days previously of a force (its strength is uncertain, but it is believed to have numbered 2,000) towards Ssu-ch'uan to assist in restoring order in that province. Two thousand of the garrison remained loyal; the remainder mutinied, and under the leadership of General Li-Yuan-heng, attacked and burnt the Viceroy's "yamen" and the treasury. The Viceroy himself, Jui Cheng, a Manchu, succeeded in escaping to a Chinese gunboat, which was lying abreast of the foreign concessions at Hankow under shelter of a British gunboat; and General Chang Piao also made good his escape. Events followed in quick succession. The mutineers took possession of Wu-ch'ang, and began a general massacre of Manchus, though doubtless the numbers killed have been greatly exaggerated. On the next day it was announced that Hankow, with its arsenal and ironworks, and Hankow had both fallen, and that large numbers of troops had joined the insurgent forces.

From the first the insurgent leaders assured the foreign consuls that foreigners would be treated with every consideration, and their property respected; and that the forces of the revolution would be directed solely against the Manchu Government. So far this promise appears to have been scrupulously observed, a fact which entirely deprives the revolution of the fanaticism which has characterized all former outbreaks in China, and has gone far to enlist the sympathies of foreigners on the side of the insurgents.

Troops at the Disposal of the Imperial Government.

Meanwhile, the Peking Government had been acting with some vigour. On the 13th October the 6th Division commenced to entrain at Pao-ting Fu, 80 miles south-west of Peking, and

CHINA.



NOTE.—The Stations of the Divisions are from *Veloso's Armes Almanack* for 1911; the 3rd Division at Kwang-Chung, north of Mukden is not on the map. The shaded area represents ground at a greater elevation than 1600 feet; the thick black lines represent approximately the crests of the mountain ranges.

on the 14th, 15th, 16th, and 17th two mixed divisions, composed of units from the 1st, 2nd, 4th and 6th Divisions, the whole under the command of General Yin-Ch'ang, the War Minister, numbering approximately 20,000 combatants, entrained for the south at Peking and Pao-ting Fu. Of the four divisions from which this army has been made up, the 1st Division is composed of Manchus exclusively, and is of necessity loyal; the 6th Division is a part of the army originally raised by Yuan Shih-k'ai, and is believed to cherish the tradition of loyalty to its old chief. Indeed, their loyalty to Yuan was regarded with so much apprehension at Court, that at the time of his dismissal, this division, then performing the duties of palace guard, was relieved by the

1st (Manchu) Division. The remaining two divisions, the 2nd and 4th, formed part of Yuan's command when he was Viceroy of Chih-li, and would, it is considered, now follow his lead. There remained still, in or near Peking, details of the above four divisions, the complete Guards Division, and a well drilled body of Provincial Troops, of better physique than, and probably as efficient as the regulars.

This reserve force should amount approximately to 25,000 combatants. In addition, there is a body of modern drilled police in Peking itself numbering about 5,000 men.

The field army commenced to concentrate on the 14th October at Hsin-yang Chou, in Honan, on the Peking-Hankow Railway, about 115 miles north of Hankow, and occupied the strategically important pass over the range of mountains separating Honan from Hupei, through which the Peking-Hankow Railway runs. A portion of the 6th Division had earlier been pushed on as far as Hankow as an advanced force.

The Fighting near Hankow.

On October 18th the first engagement took place. The Imperial forces to the number of about 2,000 had occupied a position near the Hankow railway station. They were attacked on the above-named date in this position by the insurgents, whose numbers were variously estimated at from two to ten thousand. Neither side seems to have displayed remarkable courage, since, according to the *London Times* Peking correspondent, both armies ran away. A victory was claimed by either side, but since the Imperial troops appear to have run first and furthest, the insurgents may be considered to have won the day. The insurgents came under the fire, to some small extent, of Imperial gunboats under the command of Admiral Sa Chen-ping, but, on the whole, the part played by the navy in this engagement seems to have been insignificant.

The Imperial troops then took up a second position at 7-mile Creek (on the railway seven miles from Hankow Station), where they were attacked on the 21st October by the insurgents. The former fled after offering scarcely any resistance, and took up a third position at Hsiao-kan, on the railway 40 miles from Hankow.

On 22nd October the situation of the two forces was as follows: the advanced guard of the Imperial Army at Hsiao-kan, with the main army concentrating at Hsin-yang Chou, north of the pass through the Hupei-Honan mountains, and at Kuang-shui on the south side of the same pass; the insurgents consolidating their position in Hankow and Wu-ch'ang. Rumours of turning movements against the Imperial forces were current, but none appear at this date to have taken place.

Concessions Offered by the Government.

Panic now seems to have seized the Central Government. Edict succeeded edict in quick succession. One offered free

pardon to all rebels who should lay down their arms and go quietly to their homes. Another recalled Yuan Shih-k'ai from the retirement to which the vengeance of the Imperial family had banished him, and appointed him Viceroy of the provinces of Hunan and Hupei. Yuan agreed to come to the rescue of the dynasty, but upon certain conditions which the Government at first found themselves unable to accept. It is presumed that the command of the army and navy was the one condition to which the Prince Regent dared not agree; but the spectre of revolution terrified the dynasty more than the spectre of Yuan as Dictator, and his terms have now been accepted.

The latest and most significant edict dismisses Sheng Hsuan-huai, the Minister of Communications, at the bidding of the National Assembly, a body that is bitterly anti-Manchu. Sheng had made himself unpopular by his State railway policy, and the National Assembly, many of the members of which are largely interested in keeping the railways under the control of provincial syndicates, were determined that he should go.

During the next four days no move of any importance was reported from the Imperial Army, which was apparently waiting for guns and ammunition, while the insurgents, on their side, made no advance, but endeavoured to further their cause by extending the revolution along the valley of the Yang-tzu. Many cities have now gone over to the rebels, in most cases without a blow being struck for the Government. The following are among the more important: Ichang, a treaty port in Hupei at the entrance to the Yang-tzu gorges; Ch'ang-sha on the Tung-ting Lake; Kiukiang, also a treaty port on the Yang-tzu; Hu-k'ou in Kiangsi, and Si-an Fu, the capital of Shensi, hitherto a Manchu stronghold, to which the Count fled during the Boxer trouble in 1900. Canton, always a hotbed of revolutionary intrigue, also declared for the insurgents. General Feng-shan, the new Tartar general, met with the same fate as his predecessor, being assassinated on landing in Canton to take up his new post; while at a meeting of the Canton gentry it was decided that no troops or money should be sent to the assistance of the Central Government. No active assistance, however, has as yet been given to the insurgent cause by Canton.

Rumours were current on the 26th October that preparations were being made for the flight of the Court to Jehol, an ancient Imperial residence 115 miles north of Peking. On the 27th October General Yin-Ch'ang was relieved of the command of the field army by General Feng Kuo-chang, Chief of the General Staff; and an edict ordered the formation of a second army under General Tuan Ch'i-jui. Both of the two latter generals are said to be capable men. General Feng has been trained in Japan, while General Tuan was for some years Director of Army Schools at Pao-ting Fu, and has the reputation of being one of the most honest Chinese officials.

Simultaneously with the confirmation of these appointments, intelligence arrived of a forward movement on the part of the Imperial troops, which had resulted in the recapture of Hankow after severe fighting. The insurgents appear to have fought with great courage and determination, but their position was enfiladed by a destructive fire from Admiral Sa's gunboats, and they were obliged finally to retire. Reports state that the retirement was effected in good order.

It is doubtful, however, whether, in view of news from other parts of the Empire, this local success will save the Government. T'ai-yuan Fu, in Shansi, is now in the hands of the insurgents, who were moving against the main line at Cheng-ting Fu, with the intention of cutting the communications of the 1st Army with Peking. The most dramatic event however, is the presentation by General Chang Shao-tseng, commanding the 40th Brigade, of an ultimatum to the Government, threatening to march against Peking, unless the assent of the Throne is given to three memorials presented by the National Assembly, demanding firstly that a Constitution shall be framed only after consultation with the Assembly; secondly, that members of the Imperial family be excluded from the Cabinet, and that a suitable Premier be at once appointed; thirdly, an amnesty to all political offenders. General Chang's brigade, 5,000 strong, had been ordered to proceed south from Mukden, and had been temporarily halted at Lan Chou, on the North China Imperial Railway, 130 miles east of Peking. The surrender of the Government was instant and abject, and by an edict of the 30th October, assent was given to General Chang's demands.



THE CHINESE ARMY.

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INTRODUCTION.

DURING the last few years China has entered upon an era of transformation which has attracted the attention of the world.

Obstinately attached to its ancient traditions the Chinese Empire had always refused to abandon its system of isolation, which in its own belief, constituted its strength, as it was likewise convinced that the immensity of the Empire rendered it invincible. Shrouded in the stubbornness and inertia of centuries, China regarded her peaceful past as a guarantee of security for the future.

Furthermore, ever since the conquest of the country by the Manchus, everything tended to diminish the military spirit of the nation, and to exhaust the fount of its energies. Opposed to every innovation, resisting all contact with foreigners, the Chinese Government took pride in preserving intact a civilization whose antiquity was deemed its glory, and in respecting the traditions which had permitted the Empire to lead a tranquil existence through many centuries. It required the violent irruption of the Europeans into China, in the middle of the last century, to convince her of her error. After she had been compelled to cede Hong-Kong to the British in 1842, China saw her troops routed at Pali-ch'ao in 1860, by the Franco-British army, which entered Peking. The formidable Tai-ping rebellion broke out in consequence of these events. The Chinese Government, powerless to suppress it, was compelled to leave this duty to their conquerors. This confession of their weakness favoured the invasion of the foreigner, and was followed by the dismemberment of the Empire. The French and the English, after successive conquests, definitely occupied Indo-China in 1883. Formosa, the Pescadores Islands and the protectorate over Corea were lost in 1895, in consequence of the war with Japan. In 1897 the Germans occupied Kiao-chou; the English Wei-hai-Wei, and the Russians Manchuria and Port Arthur in 1898. And lastly, the Boxer rebellion in 1900, brought about an international expedition to Peking. Thus rudely shaken, China awoke from her sleep, submitted to the evidence of facts, and recognised the extreme feebleness of her political and military position. No doubt, there had been, ere this, a few clear-sighted individuals who had attempted to introduce reforms. But the efforts of a few Viceroys unsupported by the Government, were isolated and sterile. Nevertheless, the Boxer rebellion and the foreign expedition which was its result, compelled even the most oh-

stinate to open their eyes, and the necessity for reforms was seen to be imperative.

The Russo-Japanese War, disposing finally of all hesitation, stimulated the zeal of the advocates of reorganization to such good purpose, that after the events of 1905, a scheme of reforms was vigorously carried out. Among these reforms, says M. Rouire, were included at one and the same time "The reorganization of the army, of education, and of justice; the granting of a constitution, the development of railroads, and the control of the use of opium."

The ultimate consequence of the realization of this scheme will doubtless be the metamorphosis of the Chinese Empire into a great modern power. Some there are, who, imagining that this transformation will be rapidly effected, have taken alarm, and foresee the "yellow peril" increased by the formidable insurrection of this immense Empire, containing 450 millions of inhabitants, others, more conversant with the conditions under which the projected reforms would be carried out, have been able to form a more exact conception of the reality. It is important to guard against all exaggeration, especially in military matters.

It is useless to perplex oneself over figures given in the decree for the reconstruction of the army; it is more important to investigate the practical results which have been effected in the 5 years which have elapsed since the law was put into operation. In order to give an exact account of the progress achieved and to be able to appreciate at their true value both the efforts made and the difficulties which had to be overcome, it is necessary to review the ancient military institutions of China. For even now the transformation is far from being complete, and antiquated survivals still exist.

THE OLD ORGANIZATION.

In the middle of the XVIIth Century, the Ming national dynasty was dethroned by the Tartar Manchus. Persuaded that the surest way to maintain their supremacy would be to sap the energy of the conquered race, the Manchu Government adopted every measure likely to ensure the moral and military decadence of China. A Manchu army, consisting of soldiers belonging to the conquering race, alone received an organization worthy of the name. The old military ordinances were abolished, and the duty was imposed on the Viceroys and Governors of each province of forming an army as best they could. As they were compelled to maintain it at their own expense, the authorities recruited from the dregs of the population all who would consent to serve in return for a miserable ration of rice. In consequence, the army was soon regarded as no better than a band of burdensome and absolutely worthless parasites. The popular proverb, current not long since, well illustrates the contempt in which they were held. "One does not use good iron to make keys; and of honourable gentry one does not make

soldiers." The discredit spread rapidly to the Manchu army itself. It was not long before the Chinese absorbed their conquerors, who lost their own customs and language, and spoke and thought and lived as did the Chinese.

When the law of 1905 was promulgated the Chinese military institutions were still, with little change, the same as those which their conquerors had established. The Chinese forces, organized for the greater part in the 18 provinces which constitute the Empire—exclusive of Manchuria, Tibet, and Turkestan—were divided as follows:—

1. "Bannermen" (derived from the old Manchu Army).
2. The Green Battalions (exclusively composed of Chinese).
3. Troops of "Braves," and disciplined troops.
4. Mongol and Tibetan Militia, and local Militia, scattered over the whole extent of the Empire.

The "Bannermen."

These troops were formed of Manchus, of Mongols who had accompanied the conquerors when they entered China, and of Chinese who joined the Manchus under the Emperor Shun Chih.

These three nationalities were divided into 8 banners, distinguished from each other by their colours. They thus formed 24 corps or "Banners," which were grouped in threes, and to each group were assigned flags of distinctive colours. A Manchu "Banner" had 70 to 80 companies (11,000 to 16,000 men). A Chinese "Banner" had 30 to 40 companies (4,500 to 8,000 men). The soldiers were recruited from the male population between the ages of 16 and 60 years. They received a daily ration of rice for themselves and their families, and a very small pay.

The 70 to 80 companies composing a Manchu "Banner" were grouped in a fixed number of regiments (5 in Manchu and Chinese banners, 2 in the Mongolian banners), and were placed under the absolute guardianship of a chief, charged with the administration of the whole. The training of the troops was the least of his cares. His sole preoccupation was to enrich himself by economising on the pay and on the rations of rice, and by inflating his muster roll. When the time for inspection arrived, he temporarily adjusted his muster by levies of all ranks.

The officers were appointed after an examination in which physical strength and skill with the bow played the principal part. The higher ranks were filled by civil mandarins, court favourites, who were ignorant of the most elementary details of their office.

The total effective amounted approximately to 250,000 men. But their military value was almost nothing; incidents of the Chino-Japanese War proved this abundantly. "At this time," says M. Rouire, "their armament consisted of percussion guns, sabres and lances. The soldiers had no haversacks, nor camp

furniture. On the other hand they were all provided with umbrellas of waxed cloth which they carried "en bandoulière," and besides, in summer they bore fans concealed beneath the collar of their uniform. At the battle of Ping-yang it began to rain, and the Chinese soldiers hastened to open their umbrellas, securing the handle under the collar of their uniform, presenting thus an excellent target, of which the Japanese took full advantage."

The Banners furnished a certain number of special corps, better paid, and occasionally better instructed; among them may be cited the guards of the Summer Palace; those of the Mausolea and of the Hunting Parks; the corps of light cavalry and of the guides, which had a great reputation for strength and skill; the corps of Gendarmerie; and the contingent for Peking, which latterly consisted of some 20,000 men, well armed and better trained on the European system.

But in these corps as in all others, malversation reigned supreme; the officers were ignorant of their profession, and the soldiers were useless on the battlefield.

The Green Battalions (or "Camps").

These took their name from the Green Banner under which all the Chinese troops were enrolled. Every province organized its special corps; there were 20 of these corps, forming 75 divisions and 120 brigades, amounting all told to 1,000 battalions (*ying*) with an average effective of about 500 men each.

Recruited by voluntary enlistment among Chinese of 16 to 60 years, the troops of the Green Standard constituted, in reality a militia or police force, in contradistinction to the "Banner forces," in whom the Government desired to see, let us call it, the active part of the military forces of the Empire.

The Green Battalions were in no respect an army. Their military instruction was inferior even to that of the Bannermen, their pay was a mockery, and their equipment was as antiquated as it was ridiculous. The officers were hardly more efficient than the men; responsible to no one, they only sought to make their posts lucrative, taking good care not to instruct the troops in operations despised by all, and which they themselves boasted of ignoring. Certain corps of the Green Standard were also entrusted with special missions, of which the chief were:—

- (a) Furnishing escorts for the convoys of grain destined for the soldiers.
- (b) The duty of guarding the dykes of the Yellow River.
- (c) The service of maritime police on the Yang-tse-kiang.

The "Braves" and Disciplined Troops.

During the Tai-ping rebellion, in addition to the Green Battalions, a force was raised which was styled "The Irregulars," but which was more generally known as "Braves."

There were some viceroys or governors of provinces who considered it expedient to have under their independent control forces capable of suppressing the revolts. These corps were enlisted for varying periods of service; they received higher pay than the forces of the "Green Standard," and some pains were taken with their training.

Gradually, and by the influence of clear-sighted and better advised viceroys, the "Braves" of some provinces were trained in modern methods, under the direction of German officers and non-commissioned officers.

Those corps which had been formed on the model of European units were at the same time armed with improved rifles and artillery.

Two viceroys, especially Chang Chih Tung in Hu-peh, and Yuan Shih K'ai in Honan, thus organized troops, whose military value was incomparably superior to any which China had hitherto possessed. They were styled Lien-chün or the disciplined ones. They were the origin of the active troops whose creation was decreed in 1905 for the whole empire.

We extract from an article by Colonel Grandprey, the following succinct account of the organization which the viceroy Chang Chih Tung had bestowed on his troops.

The élite of this corps constituted the viceroy's guard, which corps consisted of 7,150 men, of whom 5,350 were incorporated in 3 regiments of infantry; each regiment had 2 battalions of 4 companies each, each company comprising 200 to 250 men; of the remainder, 750 were artillery men, 300 cavalry, and 750 engineers. The artillery was attached to the battalions in the proportion of 12 Krupp guns to each battalion. As a general rule, all disciplined troops were organized on the model of the guard.

The period of service was for ten years; at the expiration of this time the viceroy found employment for the soldiers on his railroads, his police, his factories, etc. The pay was 21 francs a month for the guards, 12 francs for the line. The soldiers provided their own rations, which did not cost them more than 5 francs a month.

Each man was entitled to six outfits, of Chinese pattern, of which four sets were retained in store. The quarters for the troops were not inferior in their arrangements to those constructed for European soldiers.

The training was carried out on German principles; the soldiers quickly learnt to manœuvre in close order, but open order operations were much neglected. The officers especially never attained to more than a very relative value. When theory was exchanged for practice they were absolutely incapable of initiative, and in spite of all its good qualities the army suffered from want of leaders.

In order to remedy this state of affairs the viceroy founded military colleges, in which the instruction was entrusted to German and Japanese officers, and finally he sent officers to

Japan to go through military courses in the schools and regiments of that country. He also created an arsenal and a small arms factory and powder mills; and these important establishments he placed under German direction. It was owing to his unceasing efforts that Chang Chih Tung succeeded in organizing and mobilizing an army of 45,000 men.

Similar organizations existed likewise in Pechili and a few other provinces. But the results obtained were frequently inadequate, in the absence of intelligent supervision. The ludicrous weapons were in a great measure retained; in one and the same unit would be found modern rifles and artillery, but of three or four different patterns.

Mongol, Tibetan and Rural Militia.

The military value of these corps being quite insignificant, it is needless to waste time in considering them. The first might possibly have rendered some service, had an effort been made to organize them. A contingent of approximately 50,000 horsemen might then have been formed. But scattered over an immense territory, they were little more than very inferior bands, without any bond of union.

The defects of the old Chinese organization are apparent to everyone. After allowance has been made for the want of training, for defective armament, etc., it is clear that the fundamental vice of the military system was the absolute lack of cohesion, and the right conceded to the viceroys and governors to organize armies at their pleasure. It is true that there existed a central body called the Board of War; but it was a purely civilian institution, in which the military performed only the trivial duties of government messengers.

In the article which the *Revue de Paris* published in 1904, Colonel Grandprey wrote:—

"The Board has six heads, i.e., two presidents (one a Manchu and the other a Chinaman), and four vice-presidents (two Manchus and two Chinese). The important posts on this commission are filled by nomination, but no one has any authority.

The presidents and vice-presidents occupy similar positions in various departments, such as revenue, rites, public works, etc., besides holding posts in the palace, commands in the Manchu "Banners," etc., and time necessarily fails for any serious work."

As regards organization, there had been no change during hundreds of years.

"Every governor or viceroy has his own Army, of which he is the absolute master; he has his own Board of War, and only sends to Peking reports which are frequently false. The Peking Board prescribes nothing; its functions are limited to filing records, or inviting viceroys to co-operate for some common purpose. It neither originates nor impedes any reforms; it is ignorant of the resources of the Empire, because the data received are never compared. In time of peace no preparation is made for war, nor is time devoted to studying plans of campaign. In case of attack, the

viceroy nearest to the point menaced, is from the force of circumstances, the one who must bear the burden of the struggle."

It is astonishing to see how little the Chinese Government has done to combat the vices of this system, although it recognized that they threatened the army with ruin. The explanation lies in the mentality itself of the Chinese race, opposed to all reform, and bound to its past by centuries of tradition.

The force of circumstances, however, compelled the Government to acknowledge that the reformers were right, and to follow in the path which they had traced out. The first step was taken when it was decided to raise the moral standard of the army. The status of a soldier ceased to be considered degrading, and as the position of the officers was raised in estimation, the nobles and gentry began to enrol their sons under the colours.

In 1901, an Imperial Edict ordered the formation for the whole Empire, of troops for active service, for reserve, and for the police. The extension of the organization was, however, ineffective, and it continued to be under the control of the viceroys. The necessity was then realized of constituting a supreme control, in order to secure unity of purpose and sustained action. In 1903, a commission of military reorganization was instituted in Peking. As a real Superior Council of War, it was invested with supreme authority in military matters, both over the Board of War and over the viceroys. The Council lost no time in regulating and co-ordinating the various individual efforts. The Japanese manoeuvre regulations were put into force, and in the beginning of 1905 the Council caused to be decreed the reorganization of the army, subject to one universal scheme of recruitment, training, and equipment.

PRESENT ORGANIZATION.

The law promulgated in the beginning of January, 1905, decreed that the Chinese Army should from henceforth be national, instead of a heterogeneous compound of provincial forces controlled by the viceroys. This is the fundamental law of the new organization, supplemented by later edicts.

General Organization.

The Chinese Army comprises three great sub-divisions:—

Active Army (Chang Pei Chün).

First Reserve (Hsü Pei Chün).

Second Reserve (Hou Pei Chün).

For the maintenance of order three different police forces were created under the general denomination of *Hsün Ching Chün*. All the old troops are destined to disappear; no young soldiers are received into the ranks, and the old corps are only employed in police operations pending their complete extinction.

The active army is formed in divisions. Later, these may be grouped into army corps in time of peace, if judged advisable. The Divisional Headquarters have a continuous existence, in peace as well as in war. In war time, two, three, or four divisions could be formed into army corps, and some of these, again, into armies. They would then be provided with a general staff and headquarters.

A division comprises :—

- Headquarters with General Staff.
- 2 Brigades of infantry (4 regiments, 12 battalions).
- 1 Regiment of cavalry (3 squadrons).
- 1 Regiment of artillery (9 batteries).
- 1 Battalion of machine guns, of 4 companies (24 machine guns).
- 1 Battalion of engineers.
- 1 Battalion of transport; which provides personnel and teams for—
 - (a) 6 Field hospitals.
 - (b) 1 Pontoon troop.
 - (c) 4 Sections of small arm ammunition for infantry.
 - (d) 3 Sections of artillery ammunition.
 - (e) Transport of 4 days rations.
- 1 Telegraph detachment.
- 1 Battalion of communication troop (railroads, bridges, aero-station, telegraphists).
- 1 Mobile remount dépôt.
- 1 Band.

Each province must raise a certain number of divisions, according to its resources. The total number has been fixed definitely at 35, not including Manchuria and Mongolia. It is expected that all these divisions will be completed by the end of 1912.

Organization of Arms and Services.

(A). **INFANTRY. PEACE FOOTING.**—The infantry is grouped in brigades of 2 regiments, consisting of 3 battalions each. Each battalion consists of 4 companies. A company is composed of 3 sections, and each section of 3 squads of 14 men of all ranks. The companies of a battalion are denominated the right, the left, the vanguard, the rearguard.

WAR FOOTING.—In case of war, the strength of the company is doubled by drafts of reservists. To each squad is linked another, with the result that there are 6 squads in each section.

(B). **CAVALRY. PEACE FOOTING.** The cavalry is organized in regiments of 3 squadrons. These squadrons are composed of 4 troops, each of which is divided into 2 squads, each squad consisting of 14 men of all ranks. The regiment bears the number of the division to which it belongs.

WAR FOOTING.—The cavalry must always be ready to mobilize at a moment's notice. Its effective is not increased in war time. Each squadron receives only 14 saddle horses, 12 mules, 4 grooms, 32 horse boys, and 4 drivers.

(C). **ARTILLERY. PEACE FOOTING.**—The artillery is organized in regiments. Each of these comprises 3 battalions of 3 batteries, with 6 guns each. The battery is divided in 3 sections, each consisting of 3 squads of 14 men each, of all ranks.

One battalion in each division is armed with mountain guns, but this is not an invariable rule; the divisions stationed in very hilly provinces may have 2 battalions armed with mountain guns. The regiment bears the number of its division. In each battalion the batteries are called the right, the centre, the left.

WAR FOOTING.—The batteries do not receive any augmentation of combatant reservists. It is only considered necessary to double the drivers, the horse-boys, and the stable-boys. Each battalion receives in war time in addition, 108 draught horses, 46 saddle horses, 36 pack mules, and 6 baggage wagons. Each mountain battalion receives 8 saddle horses, 144 pack horses and 36 pack mules.

(D). **ENGINEERS. PEACE FOOTING.**—The engineers are organized in battalions which bear the number of their division. A battalion comprises 4 companies (right, left, vanguard, rear-guard), divided into 3 sections of 3 squads each. A squad consists of 14 men of all ranks.

WAR FOOTING.—The units are not reinforced on mobilization. A battalion only receives 8 coolies, 24 mules, and 8 carts. It is divided into pontoon detachments, sappers and miners, and labourers.

(E). **TRAIN.**—The duty of the train is to supply transport to all the departmental corps attached to the divisions—corps which so far, are in a very embryonic condition.

PEACE FOOTING.—The battalion has the same constitution as in the infantry, and bears the number of the division to which it belongs.

WAR FOOTING.—In order that the battalion may perform its function of organizing all the departmental corps, it has to be strengthened with a large number of reservists, with recourse to the second reserve as well, and, in case of necessity, to the coolies.

On mobilization at least five times the number of wagons, horses, and mules will have to be requisitioned.

As matters stand at present, the organization of the departmental corps is not yet finally determined, and the decree will yet undergo many fundamental changes. It is not possible, therefore, to regard the departmental corps in the divisions as finally organized.

The accompanying tables show the establishments of the Divisions in time of peace, and in war time. As regards the last category, it is impossible to calculate them with any degree of accuracy, as the number of reservists is, as yet, inadequate. In case of war, the divisions as at present organized, would therefore have to start on a campaign with their peace effectives.

TABLE I.
PEACE ESTABLISHMENT OF A DIVISION.

Units.	Officers.		Men.		Horses.			Wag-gons.	Guns.		Ammunition Waggons.	
	Combat-ants. (1)	Non-combat-ants. (2)	Combat-ants. (1)	Non-combat-ants. (2)	Saddle.	Draught.	Pack.		Field.	Mountain.	Field.	Mountain.
Head-quarter Staff of the Division	19	18	50	5	17	—	—	—	—	—	—	—
2 Brigade staffs	12	4	36	4	14	—	—	—	—	—	—	—
4 Infantry regimental staffs	28	16	56	4	20	—	—	—	—	—	—	—
1 Artillery staff	7	4	14	1	7	—	—	—	—	—	—	—
1 Cavalry staff	8	4	14	1	17	—	—	—	—	—	—	—
12 Battalions of infantry	252	132	6,708	816	—	—	—	48	—	—	—	—
2 Brigades of field artillery	44	16	848	228	100	468	—	24	36	—	54	—
1 Brigade of mountain artillery	22	8	424	141	16	—	270	—	—	18	—	360
1 Regiment of Cavalry	63	24	759	252	716	—	—	4	—	—	—	—
1 Engineer Battalion	25	7	559	78	—	—	—	12	—	—	—	—
1 Train Battalion	27	9	559	169	106	—	—	72	—	—	—	—
1 Band	—	—	—	50	—	—	—	—	—	—	—	—
Totals	507	242	10,027	1,737	1,013	468	270	160	36	18	54	360
	749		11,764		1,761			54 guns.				

(1). Combatants.—Among these are included Surgeons, Veterinary Surgeons and Paymasters.

(2). Non-combatants.—Among these are reckoned a certain number of Clerks and Secretaries, ranking as officials.

TABLE II.

WAR ESTABLISHMENT OF A DIVISION.

Units.	Officers.		Men.		Horses.			Mules.	Wag-gons.	Guns.		Ammunition Waggon.	
	Combat-ants.	Non-combat-ants.	Combat-ants.	Non-combat-ants.	Saddle.	Draught.	Pack.			Field.	Moun-tain.	Field.	Moun-tain.
Head-quarter Staff of the Division	19	18	50	5	17	—	—	—	—	—	—	—	—
2 Brigade staffs	12	4	36	4	14	—	—	—	—	—	—	—	—
4 Regiments of infantry	280	148	12,812	1,012	20	—	—	332	144	—	—	—	—
1 Regiment of cavalry	71	28	773	385	839	—	—	72	24	—	—	—	—
1 Regiment of Artillery	73	28	1,286	508	223	684	422	—	36	36	18	54	360
1 Engineer battalion	25	7	559	84	—	—	—	36	12	—	—	—	—
1 Transport battalion	27	9	2,003	479	106	—	—	1,800	360	—	—	—	—
1 Band	—	—	—	50	—	—	—	—	—	—	—	—	—
Totals	507	242	17,519	2,027	1,219	684	422	2,300	576	36	18	54	360
	749		20,046		2,325 horses.					54 guns.			
			20,765 men.										

(To be continued.)

THE WAR IN THE MEDITERRANEAN.

[Continued from October JOURNAL, page 1364].

I. EVENTS UP TO THE LANDING OF THE EXPEDITIONARY FORCE.

(A) Military Measures. (B) Coast Defence Measures. (C) Naval Operations. (D) Transport of the Expeditionary Force. (E) Tripoli during the Naval Occupation.

II. MILITARY OPERATIONS OF THE EXPEDITIONARY FORCE.

(A) Military Operations near Tripoli. (B) Military Operations in Cyrenaica.

III. POLITICAL NOTES.

(A) Italy and Turkey. (B) Neutrals.

I. EVENTS UP TO THE LANDING OF THE EXPEDITIONARY FORCE.

(a) Military Preparations.

ITALY.—The composition of the Expeditionary Force was briefly described in the October JOURNAL (page 1363-4).

The following additional details are taken from *Marine Rundschau*, November, 1911.

The mobilization affected 7 corps, viz:—Palermo, Naples, Rome, Florence, Verona, Milan, Turin. Complete regiments were taken from these corps, and were raised to war strength (2,500 to 2,600 men) by drafts of volunteers from other regiments. The total strength of the force was about 40,000 men; all ranks were equipped with the grey-green uniform, and the artillery had received the new M.1906 7.5-cm. Krupp quick firing field gun. General Caneva di Salasco was appointed to command "all the troops and all the ships belonging to the Tripoli expedition."

TURKEY.—The military measures since the outbreak of war include:

(1) Raising the strength to 600 of the Nizam battalions in the divisions at the following coast localities, Beirut, Smyrna, Salonica, Gallipoli, Dedeagach, Rodosto.

(2) Mobilization of the Yanina and Kozani Nizam divisions and of the Elbassan, Berat, and Yanina 2nd Class Redif divisions in Epirus and Southern Albania, with some reserves assembled at Salonica.

(3) An increase of about 100 men per Nizam battalion in Rumelia.

The distribution of Turkish Army Corps was shown in the Map (Plate IV.) in the October JOURNAL. The following is a summary of the regular divisions on the peace establishment under the new organization (Numbers in Arabic numerals refer to divisions) as given in *Militär Wochenblatt*, 4th April.

1ST INSPECTION (CONSTANTINOPLE).

ARMY CORPS.

Ist: Headquarters, 1st, 2nd, and 3rd, Constantinople.

IIInd: Headquarters and 4th, Rodosto; 5th, Gallipoli; 6th Smyrna.

IIIrd: Headquarters and 7th, Kirkilisse; 8th, Chorlu; 9th, Baba Eski.

IVth: Headquarters and 10th, Adrianople; 11th, Dedeagach; 12th Gumuldshina.

IIND INSPECTION (SALONICA).

ARMY CORPS.

Vth: Headquarters and 13th, Salonica; 14th, Seres; 15th, Strumitza.

VIIth: Headquarters and 17th, Monastir; 16th, Ishtib; 18th, Dibre.

VIIIth: Headquarters and 19th, Uskub; 20th, Mitrowitza; 21st, Djakowa.

VIIIth: Headquarters and 25th, Damascus; 26th, Aleppo; 27th, Haifa.

IIIRD INSPECTION (ERZINGYAN).

IXth: Headquarters and 28th, Erzerum; 29th, Baiburd.

Xth: Headquarters, 30th and 31st, Erzingyan; 32nd, Charput.

XIth: Headquarters and 33rd, Van; 34th, Mush.

IVTH INSPECTION (BAGHDAD).

XIIth: Headquarters and 35th, Mossul; 36th, Kerkuk.

XIIIth: Headquarters and 37th, Baghdad; 38th, Basra.

XIVth: (Yemen). 39th, Sana; 40th, Hodeida; 41st, Assyr.

INDEPENDENT DIVISIONS.

22nd: Kozana.

42nd: Tripoli.

23rd: Yanina.

43rd: Hejaz.

24th: Skodra.

The establishment of the Tripoli garrison should, as stated in the October JOURNAL (page 1359) have numbered about 10,000; but it appears that, at the outbreak of war, the total force was actually not above 7,000. Of these, 3,000 were at Tripoli, 400 at Benghazi, 70 at Derna, 30 at Tobruk, 25 at Solum, and 10 men at Cyrene.

After the evacuation of Tripoli town, the Turkish troops withdrew to Gharian, distant 2 days' march, where the organization of the Arab irregulars was commenced. Detachments were left at Vehare and Gargaresch to keep touch with the invaders. About the middle of October Munir Pacha, commander of the garrison was superseded by Nischat Bey.

(b) Coast Defence Measures¹

ITALY.—At the time of the mobilization (23rd September), the defences of Taranto and Brindisi were put on a war footing; coast defence companies were stationed between Cap Santa Maria di Lucia and Ancona, and coast guard stations were occupied as for war. Lights were extinguished for a short time after war was declared. On the 2nd October the fortress of Venice was declared to be provisionally on a war footing.

On the 10th October the garrison of Erythrea, which, before the war, had been 3,700 men, was increased to 10,000 by the mobilization of the native levies.

TURKEY.—Mines were laid in the entrances to Salonica, the Dardanelles, Beirut and Smyrna; some harbour defences have been commenced at the latter place. Lights in the Red Sea were extinguished, to the great inconvenience of neutral Powers.

(c) Naval Operations¹

MOBILIZATION.—The organization of the Italian High Sea Fleet at the outbreak of the war is believed to have been as follows:—

1ST SQUADRON.—(Vice-Admiral Aubry), 1st Division: Battleships "Vittorio Emanuele," "Regina Elena," "Roma," "Napoli"; and 4 destroyers.

2nd Division (Rear-Admiral Presbitero): Cruisers "Pisa," "Amalfi," "San Marco"; torpedo vessel "Agordat" and 4 destroyers.

IIIND SQUADRON.—(Vice-Admiral Faravelli), 3rd Division: Battleships, "Benedetto Brin," "Regina Margherita," "Emanuele Filiberto" and 4 destroyers.

(¹) From *Marine Rundschau*, November, 1911.

4th Division: (Rear-Admiral Thaon de Revel): Cruisers, "Garibaldi," "Varese," "Ferruccio"; torpedo vessel "Coatit" and 4 destroyers.

TRAINING DIVISION.—(Rear-Admiral Borea Ricci): Battleships, "Sicilia," "Sardegna," "Re Umberto," "Carlo Alberto."

INDEPENDENT DIVISION.—Under the Duke of the Abruzzi: Battleships, "St. Bon"; cruisers, "Vettor Pisani," "Marco Polo," "Lombardia," with 5 destroyers, and from 4 to 8 torpedo boats.

The order for the mobilization of the fleet was given on the 23rd September. Four classes of the reserve (about 4,000) were called up. Six vessels, the "Sicilia," "Re Umberto," "St. Bon," "Emanuele Filiberto," "Carlo Alberto," "Marco Polo," which had been on a reduced establishment as regards personnel and *material* were not completely mobilized till the 1st October. The "San Marco" was undergoing repairs till the 1st October; and the "Regina Elena" and "Regina Margherita" till the 5th October.

MEDITERRANEAN.—On the 24th September, 7 battleships and cruisers with destroyers left Augusta for the coast of Tripoli, followed by two battleships and 4 destroyers on the 27th. The force which bombarded Tripoli on the 3rd and 4th October consisted of vessels of the IInd Squadron and the Training Division, the whole under Vice-Admiral Faraulli; meanwhile the 1st Squadron under Admiral Aubry was cruising off the coast of Cyrenaica, with some vessels detached into the Aegean Sea watching for any movement of the Turkish fleet.

AEGEAN.—It appears that at the outbreak of the war the Italians had only a few torpedo vessels in the Aegean; these are believed to have been reinforced later by the battleships of the 1st Squadron. Italian war vessels were seen on the 30th September off Smyrna, Salonica, Thasos, Chios, and Mytilene; on the 4th October off Dedeagach; on the 6th off Sneidje; and on the 15th (3 destroyers) off Mytilene.

The Turkish fleet consisting of 2 battleships, 2 protected cruisers, 9 destroyers had left Beirut on the 28th September unaware of the imminence of war. It proceeded slowly to the S.W. coast of Cyprus, and was only informed of the outbreak of war on the 1st October. The British officers decided to remain with the fleet till it reached the Dardanelles. The course taken was between Mytilene and the mainland; the Dardanelles were reached at 4.30 p.m. on 1st October, 5 destroyers arriving on the 3rd.

The fleet was anchored off Constantinople till the 16th October, and then went to carry out practice in the Sea of Marmora.

ADRIATIC.—The prohibition of operations in the Adriatic (6th Oct.¹) did not result in an entire cessation of hostilities. On the 7th October a Turkish vessel was captured off San Giovanni de Medua. About the middle of October the Italian vessels were blockading the Turkish torpedo boats in their harbours, special attention being given to the coast between Prevesa and Corfu, and the Bay of Valona.²

RED SEA.—On the 2nd October the "Aretusa" and "Vultorno" engaged the Turkish gunboat "Peik i Shevket," which took refuge in Hodeida harbour. The "Aretusa" bombarded the harbour and the forts and sank a customs motor boat. The small cruiser "Puglia" was sent to Erythrea in the middle of October with guns and stores for the garrison.

(¹) See October JOURNAL, page 1363.

The Turkish cruiser "Muin i Zafir" from Beirut, and a Turkish transport with 750 men from Hodeida reached Port Said on the 30th September, and a Russian vessel with 800 Turkish troops from Hodeida reached Suez a few days later. As their continuance at these ports was incompatible with Egyptian neutrality the Russian vessel was ordered to land its troops (among whom cholera had broken out) on the 7th; the troops in the "Kaiseri" were disembarked and marched with an Egyptian escort via Kalaat and El Arisch to Palestine; and the "Muin i Zafir" and another Turkish gun boat were disarmed.

OCCUPATION OF MARSA TOBRUK.—On the 4th October the 1st Squadron bombarded the small fort at this place and put a landing party of 400 men on shore. The Turkish troops, 25 in number, resisted bravely, but were soon overpowered. The harbour has since then been constantly used by vessels of the 1st Squadron. On the arrival of the troops on the 10th October (see below), the naval detachment was re-embarked.

OCCUPATION OF DERNÄ.—On the 8th October the "Napoli" bombarded Derna for 1½ hours and obtained the release of 40 Italians held prisoners.¹

(d) The Transport of the Expeditionary Force.²

Some 60 transports varying in tonnage from 1,300 to 9,200 tons had been requisitioned for the expedition, and were assembled at Naples, Genoa, and Palermo. A certain number of transports intended for use as auxiliary cruisers were armed with guns. Each transport was commanded by a naval officer with a detachment of 10 to 25 men of the navy.

Disregarding the detachment of the IInd Division sent to Marsa Tobruk (5th Oct.), the transport of the expedition was carried out in two echelons, the first comprising the Army Staff and the 1st Division, destined for Tripoli; the second comprising the IInd Division for Cyrenaica.

TRANSPORT OF TROOPS TO TRIPOLI.—On the 9th October, the first echelon conveying the staffs and a part of the 1st Division began to leave the ports. On this day 12 steamers sailed from Naples and 9 from Palermo.

The formation adopted while still in Italian waters was single line ahead, with a cruiser or destroyer leading and a war vessel on each beam; but before leaving the Sicilian coast two transports and a hospital ship were sent on in advance, escorted by the "Varese," to Tripoli. The remainder were formed in 2 convoys, one of 14 and one of 19 vessels. These convoys steamed in column of divisions in line ahead at 10 to 12 knots, with two battleships and some torpedo boats ahead and astern of each convoy. Meanwhile a screen of destroyers was extended between Augusta and Tripoli, and some vessels of the 1st Squadron watched the entrance to the Aegean Sea. During these operations Admiral Aubry was at Augusta. On the 11th October the two transports which had gone on in advance reached Tripoli and disembarked 5 battalions of infantry, including the 11th Bersaglieri. On the 12th the first convoy of 19 transports arrived at Tripoli; ships' boats towed by steam launches and torpedo boats, some lighters belonging to the port, and some large fishing boats brought from Lampedusa were used for disembarking. Four trestle piers were constructed by the engineers. The first convoy had finished disembarking on the 15th October, and the second on the 18th, by which time some 20,000 troops had been disembarked.

(1) *Times*. (2) *Marine Rundschau*, November, 1911.

On the 21st October Homs was occupied after a short bombardment.

TRANSPORT OF THE IIND DIVISION.—On the 5th and 6th October, 5 transports carrying 1 battalion of the 40th Infantry Regiment, some artillery and engineers, about 1,000 in all, left Genoa and Naples and landed at Marsa Tobruk on the 10th, relieving the naval detachment which had been landed on the 4th October.

On the night of the 12th-13th October a convoy of 20 transports, including 7 vessels which had come from Genoa, left Naples with the greater part of the IInd Division, about 9,000 men, for Benghazi. This convoy was escorted by 4 battleships of the 1st Division, 3 protected cruisers, 1 destroyer, and 2 divisions of high sea torpedo boats, and reached Benghazi, 610 nautical miles from Naples, on the 18th. The disembarkation of this convoy is described below under "Land Operations." The remainder of the IInd Division (6,000) left Naples in 2 smaller convoys on the 15th and 20th October.

On the 16th October the Second Division of the First Squadron arrived off Derna, which was defended by a small force of infantry with a few guns. An attempt was made to land under cover of fire from the ships, but was abandoned owing, it is said, to the roughness of the sea. On the 18th the sea had abated sufficiently to make landing possible and the town was occupied, apparently without resistance.

(c) Events at Tripoli During the Naval Occupation¹

It was known that the Turks had distributed 10,000 rifles to the local Arabs before evacuating the town. Orders were issued for the collection of these arms and some 3,250 had been surrendered by the 12th October.

The bombardment and capture of Tripoli were very briefly described in the October JOURNAL (page 1363). The following additional details are from the *Marine Rundschau*, November, 1911.

On the 5th October (the day after the landing) the Hamidje Fort, containing large stores of ammunition was blown up, it is not known by whom.

The naval garrison took up an outpost line round the town, using existing forts as points of support. Several skirmishes took place at the outpost line, especially at the Bu Mellian Wells $1\frac{1}{2}$ miles S.W. of the town.

II. MILITARY OPERATIONS OF THE EXPEDITIONARY FORCE.

(a) Operations Near Tripoli²

The troops on arrival relieved the naval brigade. The Turks, who were still reported to have their main force at Gharian, continued to feel the outposts every night, withdrawing out of sight by day. Reconnaissances sent out by the Italians on the 17th and 19th saw nothing but small groups of the enemy. It was reported that an expedition into the interior was being prepared.

On the 23rd October an attack was made on the left centre of the Italian line held by the 11th Bersaglieri and the 82nd Regiments. When the Italian reserves had been drawn in to the fight, the Arabs in the intricate suburb country between the town and the outpost line rose in arms, and, while some attacked the firing line in rear, others penetrated the bazaar and cut down isolated parties of Italians.

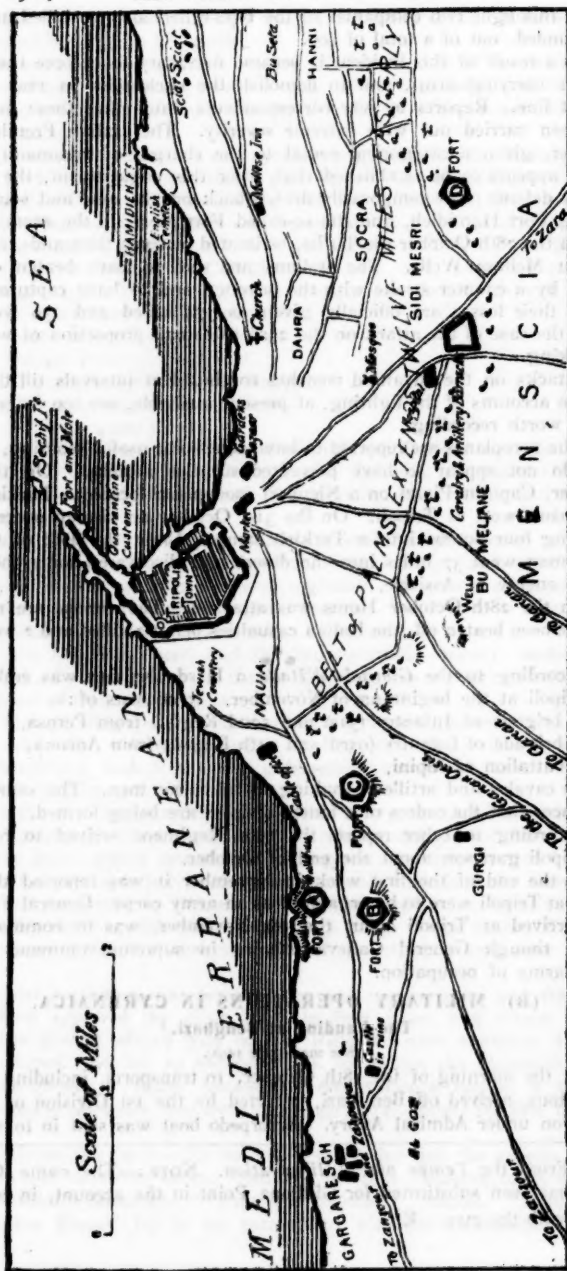
After a critical half hour the troops got the situation under control. Some 50 Arabs were tried and executed and some 2,200 deported.

(1) *Marine Rundschau*.

(2) From reports in the *Times*, 15th to 31st October.

THE OASIS OF TRIPOLI.

[Redrawn from the *Tripoli*.]



NOTE.—The Forts marked A, B, C, D are believed to be old Turkish earthworks. It appears that after the action of the 23rd October, "Fort D" and Fort Hamidiyah were abandoned, but that the latter was re-occupied about the 7th November.

The suburbs cleared by the Italians after the 23rd October lie between Dahra and Socra.

In this fight two companies of the Bersaglieri lost 300 killed and only 14 wounded, out of a total of 400.

As a result of this incident it became necessary to enforce the orders against carrying arms, and to demolish the enclosures in rear of the outpost line. Reports by war correspondents stated that these measures had been carried out with extreme severity. The Italian Premier has, however, given a categorical denial to the charges of inhumanity.

It appears to be established that, after this engagement, the Italian line of defence was temporarily drawn back on the east and south-east, leaving Fort Hamidieh, and the so-called Fort Mesri to the enemy.

On the 28th October the Turks, estimated at some thousands, attacked the Bu Mellian Wells. The Italians are said to have beaten off this attack by a counter stroke with the bayonet, and to have captured some guns; their losses are officially given as 374 killed and 150 wounded. As in the case of the attack on the 23rd the small proportion of wounded is striking.

Attacks on the advanced trenches continued at intervals till the 31st, but the accounts of the fighting, at present available, are too fragmentary to be worth recording.

The aeroplanes are reported to have done some useful scouting, though they do not appear to have prevented surprise attacks. On the 23rd October, Captain Piazza on a Nieuport monoplane located a Turkish force at Zanzur, west of Tripoli. On the 31st October an airman succeeded in dropping four bombs into a Turkish camp. About the 20th of October an airman went 37 miles into the desert and discovered some thousands of the enemy at Assisiye.

On the 28th October Homs was attacked. The enemy are reported to have been beaten off, the Italian casualties being 2 killed and 2 wounded.

According to the *Giornale d'Italia* a IIIrd Division was embarking for Tripoli at the beginning of November. It consists of:—

A brigade of Infantry (51st and 52nd Regts.) from Perosa,

A brigade of Infantry (93rd and 94th Regts.) from Ancona,

A battalion of Alpini,

besides cavalry and artillery, making in all 20,000 men. The same paper announces that the cadres of a fourth division are being formed.

According to other reports the 15th Regiment arrived to reinforce the Tripoli garrison about the end of October.

At the end of the first week in November it was reported that the troops at Tripoli were to be organized as an army corps. General Frugoni, who arrived at Tripoli about the 5th November, was to command the troops, though General Caneva remains in supreme command of the whole army of occupation.

(B). MILITARY OPERATIONS IN CYRENAICA.

The Landing at Benghazi.¹

(See map page 1498).

On the morning of the 18th October, 10 transports, including one of 10,000 tons, arrived off Benghazi, escorted by the 1st Division of the 1st Squadron under Admiral Aubry. A torpedo boat was sent in to demand

(¹) From the *Temps* and *L'Illustration*. NOTE:—The name Gastian Point has been substituted for Giuliana Point in the account, in order to agree with the map.—ED.

a surrender, but the summons was refused. A delay of 18 hours was allowed before fire was to be opened.

There were only two possible landing places: (1) east of the town; (2) at Gastian Point, and on the beach to west of it. The latter was selected because the ground in this neighbourhood could be better commanded by the ships' guns.

The remainder of the 18th was spent in preparing for the landing, and the final orders were issued during the night. The battleships were to sweep Gastian Point, and the landing was to commence at that point as soon as the enemy showed signs of wavering. A naval detachment 800 strong, organized in 2 companies, was to land first, drive off the Beduin horsemen, visible behind the Christian cemetery, and cover the erection of a landing stage. The landing of the troops was then to proceed under the close protection of the destroyers.

The troops to be disembarked were:—

The 4th Infantry Regiment,
2 battalions 63rd Infantry Regiment,
2 batteries mountain artillery,—

Some 4,000 in all.

The operations were to be conducted by Major-General Ameglio, commanding the 4th Brigade, but Lieut.-General Briccola, commander of the IInd Division and Military Governor of Cyrenaica, was present, and was in chief command.

General Briccola's orders to Major-General Ameglio were to seize Berka, Sidi Daud, a mound north of the latter village, and some point on which to rest the right flank, before nightfall. It was not expected that it would be possible to capture Benghazi that day.

Major-General Ameglio issued orders as follows:—

- (1) The 63rd Regiment and the 2nd mountain battery, under the O.C. 63rd, to remain at the landing stage as a reserve at the disposal of General Briccola.
- (2) The 4th Regiment to advance in 2 columns against Berka barracks: viz., 1 battalion and 1 machine gun section direct; and 2 battalions, and 1 machine gun section round the south of the Salt Lagoon.

The artillery to support the advance from a large mound on the beach.

THE TURKISH DISPOSITIONS.—On the 17th armed bands of Beduin had come to the gates, and a massacre of Europeans was only averted by the tact of the Turkish Governor. On the appearance of the fleet, the Governor resigned the command in favour of a Turkish captain of cavalry, who organized the defence with skill and energy. The troops at his disposal were estimated by the Italians to consist of 300 regulars and some 2,000 Beduin.

The chief opposition was prepared between the barracks and Gastian Point, which appeared the most likely landing place, and where some folds in the ground offered good cover. Riflemen were scattered among the sand dunes, and lay so motionless as to escape the observation of the Italian glasses. Some horsemen were stationed behind a sandy mound on the promontory, and were to charge home against the first troops landed.

LANDING ON THE 19TH.—On the morning of the 19th the vessels were disposed in the following order, from left to right (looking towards the shore): "Vittorio Emanuele," "Amalfi," "Roma," "Napoli," "Etruria." The "Regina Elena" lay in the second line with the transports. The

"Liguria" and "Piemonte" were cruising some distance off the coast; the two destroyers went close in to Gastian Point.

As the expected white flag did not appear, fire was opened at 8 a.m. on Gastian Point, the barracks, and the ground between them. Meanwhile, the landing parties had embarked in the boats, and the latter had been formed in groups ready to be towed.

The enemy on the beach endured the storm of projectiles stoically for a while, and then rose and retired deliberately. Immediately the boats made for the shore, which was reached at 9.30 a.m. A covering party was at once thrown out in a semi-circle, which was enlarged as fresh troops landed. An attempt to advance towards Gastian Point was met by fire from the cemetery.

As the town still remained silent, a torpedo boat and a steam pinnace went in to reconnoitre, but were fired upon near the harbour. The ships replied, demolishing the custom house and other buildings. A number of Arabs now made a brave attempt to cross from the town by the isthmus north of the Salt Lagoon, but were practically annihilated by the fire from the ships.

Meanwhile, the landing stages had been erected, and the infantry were disembarking. The landing of the mountain artillery, with its mules, caused much delay, and it was afternoon before an advance could be made. A



THE LANDING AT BENGHAZI.

[From maps in the *Times* and *L'Illustration*.]

mound, which offered a position for the artillery, had already been occupied.

It was not found possible to keep to the plan, owing to the irregular arrival of the boats. At 3 p.m. 2 battalions of marines, 4 of infantry, with machine guns, and 2 batteries were available.

General Ameglio left 2 batteries in reserve, and advanced with the remainder in 2 columns by the routes previously arranged. Detachments had to be made up into battalions as they landed, and it was not possible to reorganize them. Thus the left column, under the general, consisted of 4 naval companies; 2 companies of 63rd Regiment; 2 of the 4th Regiment; and 1 battery.

The right column was made up chiefly from the 4th Regiment, and was under Colonel Mocaggata.

The left column, advancing across the narrow isthmus, had little space to deploy, but could be well supported by the fleet. Some trenches across the isthmus had to be taken with the bayonet. The right column was attacked on its right flank by the enemy's horsemen. Towards nightfall the two columns joined hands at the barracks, which they took by storm. Sidi Daud was next occupied, the enemy disputing every foot of the ground. Outposts for the night were established at Sidi Hsein.¹

During the advance the Turks had fired from the southern quarter of Benghazi, and after dark the losses from this quarter became so serious that Admiral Aubry was reluctantly compelled to bombard the town. Several Maltese, British subjects, perished in this nocturnal bombardment. The enemy then evacuated Benghazi, which was occupied by the Italians next morning.

On the 20th and two following days the Turks made some further attacks on the north side of the town; they are then believed to have withdrawn with their guns to the plateau inland. The losses of the Italians are given as 25 killed and 77 wounded; those of the Turks were estimated at 200 killed, besides many wounded.

III. POLITICAL NOTES.

(a) Italy and Turkey.

ITALY.—The Italian Government notified the Powers that firearms, weapons, and warlike stores of all sorts, would be considered as contraband of war; coal and foodstuffs, whatever their destination, would not be considered as contraband. As the Ottoman Government had not exempted merchant ships from capture, the Italian Government reserved the right to capture Turkish merchantmen.

Instructions were issued to port commanders to allow Turkish vessels in port at the time of the Declaration of War, or arriving unaware of it, to proceed without hindrance, and that Turkish vessels in port through stress of weather should be allowed time to enable them to pursue their journey; all other vessels were to be captured. The Powers were notified of the blockade of the coast of Tripoli on the 3rd October. In the original announcement the eastern limit of the blockade was placed in Egyptian territory; this mistake was afterwards rectified.

On the 5th November a decree was signed placing Tripoli and Cyrenaica under the entire sovereignty of Italy. It was semi-officially announced that the Government were willing to discuss terms of peace, on the basis of the accomplished facts, "in a broad spirit of conciliation," provided the war was not uselessly prolonged.

(1) It is not explained what became of the Turkish defenders on Gas-tian Point.—ED.

It is stated in the French and Austrian Press that Italy has agreed to recognise the Anglo-French Convention of 1899, regarding the southern boundary of Tripoli.¹

TURKEY.—On September 29th the Turkish Cabinet resigned, and a new Ministry was formed, with Said Pacha as Grand Vizier. An appeal for intervention, which was issued to the Powers, and a telegram requesting the mediation of the German Emperor, led to no result.

On the outbreak of war the Turkish Government dismissed Italians employed on public works, and announced that Italians would be subject to the ordinary laws; but no extreme measures have yet been adopted such as a general boycott or the expulsion of all Italians from Ottoman territories.

The Grand Vizier stated that the policy of the Government was to defend Ottoman rights at all costs, and added that in order to safeguard the interests of the country it was proposed to modify the policy hitherto pursued by Turkey and to seek alliances.

(b) Neutral Powers.

AUSTRIA-HUNGARY.—As a result of the war between Italy and Turkey, numerous groundless rumours of mobilization of Austrian troops on the Italian and Balkan frontiers have obtained currency.

The rumours appear to have been caused by the intake of recruits and discharges to the reserve which take place annually in October.

A clear statement of policy by Count Aehrenthal has allayed anxiety as to the possibility of strained relations between Austria and Italy arising from certain incidents of the Turco-Italian conflict.

BULGARIA.—The reported mobilization of troops in Macedonia, and a frontier incident during the first half of October, gave rise to some alarm, and produced the usual crop of mobilization rumours in the press. As the result, however, of assurances by the Turkish Government, the situation has become more tranquil, and it appears, for the present, at any rate, to be desired to preserve the *status quo*.

There are, however, indications of public opinion in Bulgaria being inclined to take advantage of Turkey's difficulties in Tripoli in order to insist on some settlement of the Macedonian question.

The absence of the King in Hungary during the first half of this month was adversely commented upon in the Press. King Ferdinand returned to Sofia on the 19th.

GREECE.—A partial calling out of reserves as a precautionary measure in view of the Turkish movements in Epirus was reported from Athens on October 5th.

RUSSIA.—On the 12th October the Russian Government lodged a protest against the intention announced by Turkey of treating corn consigned to Italian ports as contraband of war. The communication stated that any attempt to arrest or confiscate cargoes of corn for Italian ports, so long as such cargoes were not destined for the Italian field forces, or for Italian official consignees, would be regarded as a violation of the rights of Russia. The reply of the Turkish Government was satisfactory

Large meetings of Mahomedans have been held in India and elsewhere to express sympathy with the Turks and to urge the British Government to intervene on their behalf.

(¹) See October JOURNAL, page 1349. By a printer's error the date "1909" was put in place of "1899."—ED.

THE SPANISH OPERATIONS IN THE RIFF.

The recent operations of the Spanish in the Riff country, though they have had no positive result, contain much that is interesting from the point of view of "small wars."

The operations in 1909 had led to the practical subjugation of the whole Melilla peninsula east of the River Kert, and had enabled the garrison to be reduced, at the end of 1910, to some 23,000 men. During the French operations on the upper Muluya, in June and July, 1911, the Spanish posts had been pushed southwards to Hartha and Zaio, and it was rumoured that the zone of occupation was next to be extended westwards across the Kert, so as to bring the Eastern Riff country, between Alhucemas and the Kert Valley, under the Spanish sway.

However, the warlike tribes of the Riff showed themselves determined to oppose any such move, and during August and September the posts on the Kert and the Muluya were frequently attacked. (See October JOURNAL, page 1384). It became necessary to send reinforcements from Spain, and at the beginning of October, 1911, the strength of the troops in Melilla, under General Aldave, stood at 40,000 to 50,000 of all ranks. There were said to be 19,000 men in the Ceuta area. If these figures were even approximately correct considerably more than half the peace establishment of the Spanish Army is in Africa.

As in 1909, the chief instigator of the native movement is said to be El Mizian, a fanatical Kaid, whose harangues have been instrumental in raising the tribes against the Spaniards between the Kert and Alhucemas.

On the 3rd October the Spanish War Minister arrived at Melilla to confer with General Aldave, and it was understood that an important move was about to take place.

The accounts of the operations which followed vary considerably, those from French sources having a certain anti-Spanish bias, while the reports in the Spanish press show signs of a strict censorship.

Situation on the 6th of October.

The situation on the 6th October in the Kert Valley appears to have been as follows:—

The Spanish held entrenched positions at Izhafen and Imarufen on the right bank of the river, opposite the Jebel Mauro, a mountainous mass broken by innumerable gorges. Higher up, and somewhat further back from the Kert, a brigade under the experienced General Orozco was holding a strong position at Hartha, south-west of Yadunem. The country on the left bank of the Kert, about Zebuya, seems¹ to be less mountainous than that nearer the coast; some hills called Tikermin on the left bank appear to have commanded all this district.

The guns of the Spanish warships off the mouth of the Kert were able to command some part of the country on the left bank of the Kert.

The following summary of the events of the next few days is taken from the semi-official communiqués in the *Imparcial*.

(¹) So far as is known the left bank of the Kert has not yet been surveyed. The maps published in the Spanish newspapers do not show the hill features.—ED.

OCTOBER 7th.—General Orozco starting from his camp near Yadunem with one brigade of Chasseurs, two battalions horse artillery, and 500 mounted men, crossed the Kert at Zebuya, occupied Tikermin, and laid waste the country on the left bank, within a radius of 10 miles. In connection with this operation Colonel Primo de Rivera, with four battalions of infantry, one battery of artillery, and one section of engineers, took up a position $2\frac{1}{2}$ miles beyond the Kert, opposite Imarufen, to cover General Orozco's retirement by that route. This retirement took place late on the 7th.

OCTOBER 8th.—In consequence of the lateness of Orozco's withdrawal, the covering force was left in position over night. During the night of the 7th-8th it was hotly attacked by the enemy, and suffered considerable losses (1 officer killed, 7 wounded, 14 men killed, and 41 wounded). At dawn it was withdrawn, the operation being covered by 1 squadron, and 3 battalions from Imarufen, who crossed the Kert and advanced towards Tikermin, but found no signs of the enemy.

OCTOBER 11th-12th.—The Moors crossed the Kert, and made a night attack on Imarufen.

OCTOBER 14th.—The Moors made a determined attack on the Spanish positions, but were driven off. General Ordonez was mortally wounded, 2 officers and 15 men wounded. Native reports stated that the strength of the Moors had increased to 5,000 men and 1,000 horse.

OCTOBER 19th.—The Moors made an attack on the Spanish positions on the right bank of the Kert, but were driven off.

OCTOBER 19th.—A force consisting of 2 battalions, 4 squadrons, and irregulars, marched from Nador to Zeluán, and destroyed villages in the neighbourhood of the latter place, and returned.

OCTOBER 20th.—Spanish war-ships bombarded the villages of Trafats and some other hamlets. The Spanish positions were "sniped" throughout the day.

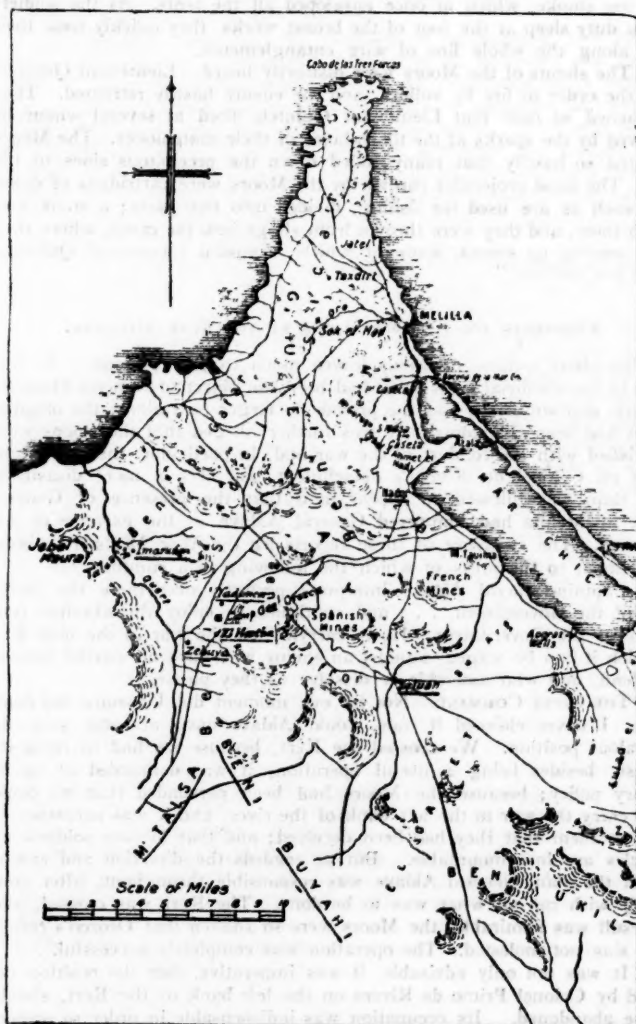
OCTOBER 20th-21st.—The Moors threw six dynamite cartridges into a Spanish work, by means of slings, by night.

OCTOBER 22nd.—General Luque arrived at Cadiz. The Moors fired on a boat with mails and passengers at Alhucemas. Several caravans with contraband had been captured in the neighbourhood of Zeluán, in the territory of the Eni-Bu-Zagi, whose villages were raided.

A landing in force on the coast opposite Alhucemas was mentioned in the press as a likely move calculated to relieve the pressure now bearing on the Spanish lines along the Kert. Meanwhile, operations are reported to have been suspended till the spring owing to the heavy sea, which makes it difficult for the warships to co-operate with the troops, and to the rains which have rendered the movement of troops very difficult.

With reference to the night attack on the 21st October when the Moors used dynamite cartridges, the following description is given by the correspondent of the *Imparcial*.

MELILLA, 21st OCTOBER.—"A night attack was made on the advanced work of Bu-Cherif, some miles S.W. of El Hartha position. This out-work was held by 1 company of the Bordon regiment, commanded by Lieut. Quintela.



OPERATIONS IN THE QUERT VALLEY.

From a map in the Cavalry Journal, January 1910; names in the Quert Valley from maps in the Spanish press.]

"At 2-30 a.m. a loud report was heard, like that of a gun, accompanied by dense smoke, which at once enveloped all the tents. As the soldiers not on duty sleep at the foot of the breast works, they quickly took their place along the whole line of wire entanglements.

"The shouts of the Moors were distinctly heard. Lieutenant Quintela gave the order to fire by volleys, and the enemy hastily retreated. They approached so near that Lieutenant Quintela fired at several whom he perceived by the sparks at the touch-holes of their matchlocks. The Moors retreated so hastily that many rolled down the precipitous sides of the peak. The hand projectiles thrown by the Moors were cartridges of dynamite, such as are used for fishing, divided into two parts; a stone was tied to them, and they were thrown from slings into the camp, where they burst, tearing up stones, some of which wounded Lieutenant Quintela and a few soldiers."

COMMENTS ON THE OPERATIONS BY THE WAR MINISTER.

The above outline of events leaves much to be explained. It was asked in the unofficial press what had been the object of General Orozco's advance, and why, if it was the prelude to larger operations, the original design had been abandoned. It was further alleged that the troops were dissatisfied with the conduct of the war and, in particular, that the night attack on Colonel de Rivera's detachment had been a more disastrous affair than was allowed to appear, and that the presence of General Luque at Melilla had hampered General Aldave in the exercise of his command. The existence of these reports led the War Minister to issue a statement to the press of which the following is a summary:—

"Captain-General Aldave interprets perfectly over there the intentions of the Government, . . . and continues to enjoy the absolute confidence of the Government. He is carrying on the war in the only way in which it can be waged, against an enemy who have no martial honour to defend, and who assemble or dissolve as they please.

"THE CHIEF COMMAND.—Not for one moment did I assume the command. I never claimed it, nor would Aldave have accepted such an anomalous position. We crossed the Kert, because we had to cross it; because, besides being a useful operation, it was demanded of us by military policy; because the Moors had been persuaded that we could never carry the war to the left bank of the river, and it was necessary to prove to them that they had been deceived; and that for our soldiers no obstacles are insurmountable. But as regards the direction and execution of the plan, General Aldave was responsible throughout, after conferring with me on what was to be done. The Kert was crossed, and the result was admirable; the Moors were so shaken that Orozco's retirement was not molested. The operation was completely successful.

"It was not only advisable, it was imperative, that the position occupied by Colonel Primo de Rivera on the left bank of the Kert, should not be abandoned. Its occupation was indispensable in order to protect Orozco's withdrawal, and his passage of the Kert on his return, which was to be effected precisely between Rivera's position, and that of Imarufen on the right bank. The retention of the position during the night of the 7th-8th was also obligatory from the point of view of "moral"; for if, after the withdrawal of the brigade of Chasseurs, orders had been hastily issued to abandon the position, the Moors would have thought that they were driving us back from the left bank; and then what had

been a brilliant operation would have had the appearance of a rout. Whilst, in this way, we abandoned the position when it suited us, without being driven to do so by the enemy.

"Furthermore, granting the necessity of maintaining this position, it became necessary to guarantee adequately its security; and for this reason I ordered that the troops should be reinforced by a battalion. The position was thus held by four battalions, a mountain battery, some native police, engineers, and mines at suitable spots. There may be some who would say that it had been better to withdraw the troops; but it must be borne in mind that the retirement of the Chasseurs was not completed till very late, and if the order to abandon the position had then been given, the evacuation must have been effected by night, which would have been much more dangerous.

"The passage of the Kert, apart from the arguments which made it necessary, was only a preliminary operation. The scheme of which it formed part was a much more extensive one, agreed on between Aldave and myself, and later, with the assistance of General Larrea. The combinations and preparations were all completed. But from the very first moment we perceived, that for the accomplishment of the scheme, there were lacking conditions which did not depend upon us; in which the state of the weather and of the sea played an important part. Does this imply that these were the sole conditions for success? No; there was another. But ask me nothing on this point, for I should be unable to answer you, greatly to my regret. Indiscretion, which is a virtue in a journalist, is a defect with incalculable consequences in a Minister of State. Suffice it to say, and perhaps some day I may be more explicit, that these conditions were lacking, and in consequence it was impossible to carry out the operation in the manner projected. It was, therefore, necessary to suspend it. And I can assure you that in our long military careers, neither Aldave nor I have ever made a greater sacrifice than the postponement of this operation, on which our fondest illusions were founded.

"HOW THE WAR MUST BE CARRIED ON.—The Riff war must be a defensive war, with rapid offensive reactions, carried out at our discretion; a system of "razzias" like that effected by Orozco, and the one just completed; light columns which can fall by surprise on the "kabilas" whom it is necessary to punish by destroying their means of living, and then to return rapidly. Hence my idea of raising a corps of 2,000 horse; for these "razzias" must be the work of cavalry and native forces. I was formerly in favour of creating a corps of native troops to replace the regulars by degrees. But now I am convinced that we must not rest until we can reckon on a strong contingent of native soldiers. The battalion and squadron which I created a short time ago, already begin to render good service, and number about 200 men; and I intend to beg at once for funds to organize other similar units."

NAVAL NOTES.

BRITISH EMPIRE.

THE KING.

Their Majesties embarked on board the temporary Royal Yacht "Medina," at Portsmouth at noon of the 11th inst., on their passage to India. The "Medina," flying the Royal Standard, left the harbour a little before 3 p.m., preceded by the Trinity Yacht "Irene," and followed by the Admiralty Yacht "Enchantress," with their Lordships on board; as she reached Spithead, the escorting cruisers, "Cochrane," "Argyll," "Defence," and "Natal," took up their stations astern. After passing the Nab light-vessel, the "Medina" passed through the lines of the First Battle Squadron of the Home Fleet, and the First Cruiser Squadron, ten ships in all, and the whole then proceeded down Channel. Off Portland, the Home Fleet parted company with the Royal Squadron and put into that harbour, while the "Enchantress" with the Lords of the Admiralty, returned to Portsmouth.

THE PRINCE OF WALES.

H.R.H. the Prince of Wales was discharged from H.M.S. "Hindustan" on the 26th ult., his period of naval training having expired.

HOME.

The following are the principal appointments which have been made:—

Rear-Admirals—A. Y. Moggridge to be Rear-Admiral in the Home Fleet, to command the Portsmouth Sub-Division; C. Dundas of Dundas to be Rear-Admiral for Special Service with the Vice-Admiral Commanding 3rd and 4th Divisions, Home Fleet; H. W. Savory, M.V.O., to be Director of Transports. Captains—A. E. Grant to be Captain Superintendent of Pembroke Dockyard; B. H. Fanshawe to "Royal Arthur"; A. T. Hunt, C.S.I., to "Kent"; R. F. Phillimore, M.V.O., to "Inflexible"; C. G. Chapman, M.V.O., to "Venerable." Commanders—P. H. Mitchell to "Pegasus"; the Right Hon. Viscount Kelburn to "Acheron."

Rear-Admiral H. G. King-Hall, C.V.O., C.B., D.S.O., hoisted his flag at Devonport on the 19th ult., on board the first-class battleship "Hibernia," in succession to Rear-Admiral G. E. Patey, M.V.O., as Rear-admiral in the Second Division of the Home Fleet. Rear-Admiral C. Dundas of Dundas hoisted his flag on the 2nd inst. at Sheerness on taking up his appointment as Rear-Admiral for Special Service with the flag of the Vice-Admiral commanding the Third and Fourth Divisions of the Home Fleet, in succession to Rear-Admiral W. L. Grant, C.B.

The first-class battleship "Venerable," of the Atlantic Fleet, paid off at Portsmouth on the 30th ult., and recommissioned the following day for a further term of service with the Atlantic Fleet; she left Portsmouth again on the 1st inst. to rejoin the flag of Vice-Admiral Sir J. Jellicoe.

FIRST APPOINTMENTS IN THE ROYAL MARINES.—Owing to the fact that an insufficient number of Cadets entered at the Naval Colleges have exercised their choice in favour of joining the Royal Marines, the Lords Commissioners of the Admiralty have decided to authorize an examination to be held in December next at which 15 vacancies for appointment as Second-Lieutenants will be open. This decision implies no change of policy, but is a special measure to meet immediate circumstances.

Candidates must have been not less than 17 nor more than 18 years of age on the first day of July, 1911.

Home—continued.

The physical requirements are as for other branches of the Royal Navy, except that in addition candidates must be at least 5 feet 5 inches in height.

Candidates desirous of being examined should apply to the Secretary of the Admiralty before 20th November, when further information and the necessary forms will be forwarded to them.

Naval Expenditure of the Principal Powers.

A Return of the total Naval expenditure by the United Kingdom and the other great Naval Powers in each of the years 1901-02 to 1911-12 has been recently issued, and contains some interesting and valuable information. The total Naval expenditure, the amount expended on new construction, with the numbers of the personnel for 1901-02, and the estimated total expenditure, the estimated expenditure on new construction, and the numbers of the personnel for 1911-12, is as follows:—

GREAT BRITAIN (Financial Year: April to March):—

1901-02—Total Naval Expenditure, £34,872,299; New Construction, £5,219,357; Personnel, 33,351.

1911-12—Estimated Expenditure, £44,882,047; New Construction, £17,566,877; Personnel, 134,000.

UNITED STATES (Financial Year: July to June):—

1901-02—Total Naval Expenditure, £16,012,438; New Construction, £5,219,357; Personnel, 33,351.

1911-12—Total Expenditure (as voted), £26,584,571; New Construction, £5,343,789; Personnel, 62,283.

GERMANY (Financial Year: April to March):—

1901-02—Total Naval Expenditure, £9,530,000; New Construction, £4,653,423; Personnel, 31,157.

1911-12—Total Expenditure (as voted), £22,031,788; New Construction, £11,710,859; Personnel, 60,805.

FRANCE (Financial Year: January to December):—

1901—Total Naval Expenditure, £13,802,266; New Construction, £5,394,345; Personnel, 53,324.

1911—Estimated Expenditure, £16,705,382; New Construction, £5,876,659; Personnel, 58,649.

RUSSIA (Financial Year: January to December):—

1901—Total Naval Expenditure, £9,359,766; New Construction, £3,068,139; Personnel, 61,503.

1911—Estimated Expenditure, £13,270,376; New Construction, £4,318,045; Personnel, 46,655.

JAPAN (Financial Year: April to March):—

1901-02—Total Naval Expenditure, £4,485,892; New Construction, not given; Personnel, not given.

1911-12—Estimated Expenditure, £8,803,015; New Construction, £2,997,493; Personnel, 49,389.

ITALY (Financial Year: July to June):—

1901-02—Total Naval Expenditure, £4,912,661; * New Construction, £1,088,921; Personnel, 26,750.

1911-12—Total Expenditure (as voted), £8,379,940; New Construction, £2,277,302; Personnel, 30,587.

AUSTRIA-HUNGARY (Financial Year: January to December):—

1901—Total Naval Expenditure, £1,821,284; New Construction, £758,606; Personnel, 9,069.

* An additional £640,000 was divided between 1900-01 and 1901-02.

Home—continued.

1911—Total Expenditure (as voted), £5,152,382; New Construction, £3,125,000; Personnel, 17,277.

In all cases the amount shown for new construction includes the armament.

It will be seen from above abstract that during the ten years included, the total expenditure for Great Britain has increased (roughly) by 10 millions; the vote for New Construction by 7 millions, and the strength of the Personnel by 17,000.

During the same period the total Expenditure of the United States has also increased by some 10 millions; the expenditure on New Construction remaining about the same, while the strength of the Personnel has doubled.

In Germany during the last ten years the total Expenditure has more than doubled, having increased by over 12 millions; the vote for New Construction has been nearly trebled, having increased by over 7 millions, while the strength of the Personnel has also been doubled.

In France, the total Expenditure has increased by about 3 millions; the vote for New Construction has only been raised by about half a million, while the Personnel has been increased by 3,000.

In Russia the total expenditure has increased by 4 millions; the vote for New Construction by something over a million, but the strength of the Personnel has been reduced by 15,000 men.

In Japan, the total Expenditure has more than doubled; in 1907-08, the first year of which details are available, the vote for New Construction was something over 3 millions, but it has now dropped to rather below that figure, while the Personnel has risen by 19,000 men over the strength in 1902-03.

In Italy, the total Expenditure has been nearly doubled during the last ten years, while the vote for New Construction has more than doubled, and the Personnel is increased by some 4,000.

For Austria-Hungary the figures are perhaps the most remarkable, the total Expenditure having been nearly trebled, while the vote for New Construction has been more than trebled, and the strength of the Personnel has been nearly doubled.

It may be of interest to compare from the figures given in the Return the Estimated Expenditure, etc., of the Triple Entente as compared with that of the Triple Alliance.

TRIPLE ENTENTE:—Estimated Expenditure, £74,368,258; New Construction, £27,761,581; Personnel, 239,304.

TRIPLE ALLIANCE:—Estimated Expenditure, £35,564,111; New Construction, £17,113,161; Personnel, 108,669.

FOREIGN POWERS.**FRANCE.**

The following are the principal promotions and appointments which have been made:—

Vice-Admirals.—P. L. Chocheprat, to be Commander-in-Chief, 2nd Arrondissement Maritime (Brest); L. J. Berryer, to be Commander-in-Chief, 3rd Arrondissement Maritime (Lorient); F. P. Arago, to be Commander-in-Chief, 4th Arrondissement Maritime (Rochefort).

Rear-Admirals.—P. L. Chocheprat, L. J. Berryer, to be Vice-Admirals; F. P. Moreau, to command of 2nd Division, Second Squadron; A. J. Bouxin, to Command of Gunnery Schools; B. S. Sourrieu, to Command of Torpedo Schools; L. J. Pivet, to be Major-General of the Navy at Brest; J. B. Degouy, to be Major-General of the Navy at Rochefort;

France—continued.

M. J. Lacaze, to be Chief of the Naval Cabinet of the Minister of Marine. Capitaines de Vaisseau.—J. B. Degouy, V. B. Senès, M. J. Lacaze, to be Rear-Admirals; C. S. Bousicaux, to Command of the Indo-China Naval Division; C. De Marliave, to "Du Chayla," and Command of Moroccan Naval Division. *Journal Officiel de la République Française.*

Reorganization of the Personnel of the Navy.

M. Delcassé, Minister of Marine, has recently addressed to the President of the Republic, a Report submitting a proposed reorganization of the personnel of the navy, with a view to its being better adapted to the present requirements of the fleet.

In his Report, the Minister states "he has every hope that before the end of the year Parliament will vote the programme which will form the Charter of the Navy and the new recruiting regulations for Naval Services." In anticipation of this, it is necessary to consider what changes will be required in the present organization of the personnel serving afloat so as to provide for the instruction of every rank in the changed matériel.

CORPS DES OFFICIERS DE MARINE.

The rapid changes and development of the matériel necessitates a more extended technical knowledge, and it is, therefore, necessary to improve the instructional out-put (rendement) of the different officers' schools.

The training of a naval officer comprises three periods; preparatory instruction given at the naval schools, development of special knowledge in specialized schools, and the preparation for command which is given in the *École Supérieure de la Marine*."

The different schools each require special attention and study. New programmes have already been introduced in the *École Navale* with a view to turning out young officers who, without any intermediate stage, may be fit to perform the duties of "Enseigne de Vaisseau."

The programmes of the specializing schools (gunnery and torpedo) will be revised.

"I have decided," writes M. Delcassé, "to co-ordinate the trials which are being made by officers practising in the Military School of Aviation, and I hope to provide them in a few months with the means of investigating those new problems from a naval point of view."

The *École Supérieure* will, itself, be reorganized. As is well known the admission to this school is regulated by the promotion board without any examination; the Minister has now decided that each candidate will, in future, be required to send in a written essay which will allow of some estimate being made of the degree of his intellectual and technical culture; this will provide means for a first elimination, and a verbal examination will afterwards decide whether the candidate is suitable for admission. On leaving the school graduates will be required to pass a further examination, by the results of which they will be classified.

CORPS DES ÉQUIPAGES DE LA FLOTTE.

The new conditions of recruiting for the naval service necessitates some changes in law affecting *Inscrits*, the two years service special engagements, and the system of reserves; the special ratings which are necessary in each ship's company also require revision and their duties require definition.

The multiplication of machinery in the modern ship of war necessitates the specialization of the personnel and makes it increasingly difficult to arrange the composition of the crew. The number of special

France—continued.

ratings must be limited to those absolutely indispensable, such as helmsmen (*timoniers-gabiers*), gunners (*cannoniers*), torpedo-men (*torpilleurs*), stoker-mechanics (*mécaniciens chauffeurs*), electricians, ships'-stewards and clerks, and special auxiliary ratings (*spécialités accessoires*). These may be divided into special ratings essentially military, and tradesmen ratings. And from an economic point of view it is advantageous to increase the work done by specially trained men, lessening at the same time the repeated expense entailed by forming new ratings.

Two years service men can only be helps to men with special ratings. Young men recruited in other ways and prepared by their trades for special workmens' duties can be advantageously employed.

The right conceded to *Officiers Marinières* (warrant officers) by the recruiting law of a proportional pension after 15 years service acts well in making vacancies for promotion, but such promotion will only be given to men possessing instruction and qualification for the rating, and candidates for promotion will, in future, be required to pass an examination.

The above are the principal points of reform which M. Delcassé proposes to introduce, necessitated by the rapid progress of developments in the matériel.

Fatal Gun Accident on Board the "Gloire."

A sad accident took place on board the armoured cruiser "Gloire" when at target practice on the 20th September, by which six men were killed, and eight others more or less severely injured.

The "Gloire," flying the flag of Rear-Admiral Favereau, commanding the 2nd Cruiser Division, was carrying out prize firing at Salins d'Hyères, near Toulon, with other ships of the Third Squadron under Vice-Admiral Aubert. All had proceeded satisfactorily, when about 10-30 a.m. an explosion took place in one of the port 16.4-cm. (6.4 inch) casemates, where the gun's crew were under the command of Enseigne de Vaisseau Gnemener. The accident was due to the ignition of a cartridge at the moment of loading when entering the breech, this ignited a second cartridge, and the casemate was immediately filled with flame and gas, which prevented any help being given for some little time; air was got into the turret as soon as possible, and then a terrible sight presented itself; 14 men were lying extended on the deck, the remains of their clothing indicated by a few blackened rags, many were seen to be dead, and the survivors, suffering great agony, were conveyed to the sick bay, while a wireless message was sent to Toulon to prepare Saint Mandrier hospital, the "Gloire" returning to harbour at full speed. All the wounded were horribly burned and had also absorbed a quantity of noxious gas, the product of the explosion producing a kind of intoxication which will probably act injuriously on their recovery. The Enseigne in charge was only slightly injured.

A Commission has been appointed, composed of Rear-Admiral Favereau, the Captains of the "Gaulois" and "St. Louis," two Capitaines de Frégate and four gunnery Lieutenants to make a searching enquiry into the cause of the explosion. As the gun's crew were prize firing at the time and working at the greatest speed to get in as many shots as possible, it is thought the gun may have become dangerously hot and that all the necessary precautions may not have been taken.

Le Temps and Vie Maritime.

RUSSIA.

DOCKS.—The new dry dock at Kronstadt, which has been 3½ years under construction, was opened on the 12th September. The principal dimensions are :—

Maximum length	...	...	...	...	856 feet.
Serviceable length	...	...	...	...	750 „
Width	...	...	...	...	120 „
Depth on sill	...	...	...	...	35 „

HARBOUR IMPROVEMENTS.—The expenditure is authorized of about £237,000 on the port of Reval. The commercial harbour will be deepened to 30 feet and deep water wharves will be provided.

£79,300 is also authorized towards the construction of a commercial harbour for Sevastopol at Stryeliets Bay and for the survey of a branch railway connection.

WIRELESS TELEGRAPHS.—Expenditure has been authorized for the construction of four wireless telegraph stations, on the coast of the White Sea and Sea of Kara.

The probable sites for these stations are: Vaigach Island, a point at the mouth of the Pechora river, Sharapov, and White Island. The two first named stations are to be in working order early next year.

A Wireless Telegraph Station communicating with Riga has been opened on Runo Island, and it is reported that other stations will be erected at Revel and Libau.

SPAIN.

A writer in the (Spanish) "Revista General de Marina" makes an attack on what he alleges to be the state of inefficiency of the Spanish naval ports. The leading points of his indictment are as follows :—

First, as regards Ferrol: There are, he asserts, absolutely no arrangements for coaling; and the difficult problem of watering is no further advanced than centuries ago.—The present condition of the river mouth makes the powder magazines nearly useless, as access to them can only be gained by the tide. No attention has, he alleges, been paid to the equally fundamental consideration of interior communications in the bay by providing a reserve of barges at the Arsenal for the transport of troops detailed to occupy tactical points, instead of inviting defeat by sending them round by land.

Cartagena, says the writer of the article, is less dependent on auxiliary naval works. Nevertheless, the new ironclads are, he states, unable to turn round in the entrance to the Arsenal Docks; the buildings are in ruins, and there is no accommodation for the Marine Infantry, who, for years have been lodged "provisionally" in ruinous buildings.

The principal defects pointed out in La Carraca are the want of depth in the channel, and the inadequate coaling facilities. As regards the former, the writer considers that the dredging of the channels is urgently needed in order to enable vessels to reach the new dock; nevertheless, the allotment of a million and a half pesetas for dredging is an inadequate solution. "At present," he writes, "the principal channel has, at high tide, a depth of only eight metres between the outside wall and the new dock; the 'Carlos V.' turns with difficulty even in the wide channel, and to come alongside the sheers is a difficult operation."

Reference is also made to the inadequacy of the existing coast defences to prevent the approach of enemy's ships to the Arsenal, on the preservation of which, the value of the Bay of Cadiz as a naval base, is entirely dependent.

Spain—continued.

With regard to the powder magazines, for which provision is made in the projected scheme, the writer observes that magazines which can only be approached at certain conditions of tide are of little value.

Coming next to the question of coaling, the writer criticises the projected establishment of a coaling depôt at Isla Verde. The muddy soil of that Island is, in his opinion, unsuitable for the construction of a wharf of sufficient strength; again, large vessels cannot easily be moored there owing to the strength of the tides at the confluence of the two channels, and to the inconvenience caused to other traffic.

As regards the general question of coal and naval stores, the writer asserts that in not one of the Arsenals are there depôts of coal and oil for use of the ships; these stores are bought as required, thus placing the ships at the mercy of contractors. Quite recently, he states, the squadron had to come to Cadiz to coal, because the contractor had no coal at Cartagena.

The writer considers the shipbuilding programme, which was sanctioned by the law of 7th January, 1908, good as a beginning, but inadequate to the needs of the country.

"When," he writes, "the promised vessels have been constructed, we shall have three ironclads, and twenty-seven torpedo boats, large and small, and that is all; for in 1916, the year in which the new vessels are to be completed, the others will only be fit for the scrap heap."

The twenty-seven torpedo boats will, he presumes, be formed into one or two groups, having their bases at Cadiz, Cartagena, or Mahon. But, he points out that no provision has been made at these ports for ships, docks, stores, etc., necessary for keeping these craft in a state of efficiency.

UNITED STATES.

NAVY BUREAU OF ORDNANCE.—Commander N. C. Twining has been appointed to succeed Rear-Admiral A. G. Mason as Chief of the Bureau of Ordnance, with temporary rank as Rear-Admiral, while holding the office.

A Board has lately been sitting to consider the question of the constitution of the Ordnance Bureau, and the advisability of creating a special Ordnance Corps. After considering the subject of Ordnance in the Navy and Army, the Board has arrived at the following conclusions:—

That the design, manufacture and installation of ordnance are practically confined to the Ordnance Departments of the Navy and Army, and that the Government must depend upon the officers of these two departments for the solution of all problems in connection with ordnance work and for its progress and development. The Board finds that this condition does not obtain with any other activities in the Navy Department, since ship-designing and shipbuilding, and the design and manufacture of marine engines, the public building activities of the Navy and the work of the Bureaus of Medicine and Surgery, and the Supplies and Accounts all have the advantages of experience of similar activities in civil life. The Board therefore expresses the opinion that the organization of the Bureau of Ordnance, the detail of officers to ordnance work and the development of a sufficient number to ensure the highest efficiency in design, manufacture and installation of naval ordnance, are of great importance.

In order that a sufficient number of officers of ample training and experience may be available for these duties, which have no counterpart in civil life, the Board recommends that some modification should be made in the present system of detailing officers to ordnance duties in the Navy. The Board finds that the number of officers required for these special

United States—continued.

duties is small, and that it is not necessary to give special training to a large number, but that the number should be sufficient to ensure there being always available for duty on shore such numbers as are required, giving each officer suitable terms of sea service.

The Board carefully considered the system in force in the Army, but believes that, owing to certain radical differences, the same system cannot be advantageously applied to the Navy.

The Board is strongly of opinion that no special ordnance corps should be developed for the Navy, and it is also of the opinion that the highest efficiency could not be obtained in the Navy by restricting the performance of ordnance duties to any specified body of officers, whether this body was designated a corps or not.

The Board does not believe it advisable to select officers for ordnance duty by a qualifying examination, but believes that in certain cases, which are specified, it is desirable that officers be assigned to ordnance duty for a fixed term for three years, with suitable provision for their relief some time before their detachment.

The Board gives its opinion that the present plan of entrusting the design, manufacture and installation of ordnance material to temporary details of seagoing officers is an excellent one, and that it requires no change except in the direction of continuing and making more systematic the plan of educating a certain number of officers for these duties.

The further development of the system of instruction for the ordnance class is recommended, and the Board is of the opinion that five officers should be detailed annually for special instruction in ordnance. About twenty positions are designated under the Bureau of Ordnance as desirable to have officers on a three-year detail.

The Board has also recommended that the chief of the bureau delegate the signing of a considerable part of the mail relating exclusively to the work under that bureau to his subordinates, so that the chief of the bureau himself shall only sign the more important mail and that part which will go to other bureaus or to the department.

Experiments with Steel Skin Plates.

An experiment is now being conducted by the Navy Department at the Indian Head Proving Ground which may materially change the appearance and the arrangement of the armour plate of future battleships. If a theory advanced by some naval experts is correct, the battleship of the future will be covered by what will be known as a skin plate, with a considerable space between it and the heavy armour. It has been contended that a thin plate of steel, about an inch in thickness, will decapitate the modern projectile and greatly decrease its penetrating power when it strikes the armour plate. By caps which have recently been placed on projectiles their penetrating power has been greatly increased, and now it is proposed to counteract this by the use of skin or decapitating plates. If it is demonstrated by the Indian Head experiments now being conducted that a thin sheet of steel will decapitate shells, it will be possible to reduce the thickness of armour plate on modern battleships. What is known as the armour passage will be on the outside of the armour plate, between it and the decapitating shell. This arrangement will materially strengthen the hull of the ship, as well as add to the resisting power of armour plate. Perhaps the most important feature of the change would be the decrease in the thickness of the armour plate without reducing its resisting power. A complete revolution in the plans for new battleships would result not

United States—continued.

only in the arrangement of the armour plate, but in the size and speed of the Dreadnoughts of the Navy.

Army and Navy Journal.

Sinking a Battleship at Six Miles.

THE "SAN MARCOS" ("TEXAS") UNDER FIRE.

The policy of using old battleships as targets is not a new one; but the conditions under which the recent sinking of the "San Marcos" (formerly "Texas") by the "New Hampshire" was accomplished were so novel as to give this experiment a value which the earlier tests in the British and French navies did not have. The most striking feature was the great range at which the firing was done, the distance between the "New Hampshire" and the "San Marcos" varying from five to as far as six and a half miles for the 12 and 8-inch guns, and from four and a half to five and a half miles for the 7-inch. The accuracy of the fire, even at the greatest range, was surprising, and served to show that the methods of finding and holding the target, at present in use in our navy, are very efficient. Fire control was directed from the top of the military masts, one hundred and twenty feet above the sea, and the target was found by the new system of trial shots and "spotting." In this method a trial shot is fired at the estimated range. The officers on the lofty fire-control platform observe through their powerful glasses the splash as the projectile strikes the water. If the splash is beyond the vessel the elevation of the gun is lowered; if it falls short the elevation is raised. Thus, by trial and error, the exact range is found.

The "San Marcos," of course, was an old ship, and her 12-inch armour does not compare in resistance with our later cemented Krupp armour; but the fact that at these great distances the ship should have been found and sunk within a comparatively short time, and this by a pattern of 12-inch gun which is inferior in power to the latest type, has given great satisfaction in the navy.

The real interest and value of the experiment, however, will be found in the examination of the ship itself, and the determination of the actual damage done by the various types of projectiles. The matter of the penetration of the armour belt and the turret is only one of several questions of importance. As far as possible, the ship was placed in actual fighting condition, even to the point of having steam up and fire under the boilers. The test of the efficiency of the protective deck alone will probably be worth the expense and trouble of the experiment. Because of the great range, the projectiles, especially from the 8-inch guns, must have fallen at a considerable vertical angle of impact, and presumably the protective deck was severely tried.

At the same time it would be easy to draw too strong conclusions from the quick havoc wrought on this obsolete vessel. She was a small ship of only 6,315 tons, or less than one-fourth the size of our "Wyoming." Her armour was badly placed. She had 12 inches on the turrets and redoubt, but was unprotected on the deck below. Her 12-inch belt covered one-half of the waterline; beyond the belt was merely a 3-inch protective deck.

The condition of the ship told a dramatic story of the havoc wrought by the 12, 8, and 7-inch 45-caliber rifles of the "New Hampshire." The most significant result was that obtained when a 12-inch shell (presumably a high explosive) pierced the conning tower; burst and blew one side of the tower, weighing surely 15 to 20 tons, entirely away, hurling it to the

United States—continued.

main deck below. The same shot entirely wrecked the bridge. The chart house and navigating bridge was blown completely away, and with it must have gone steering wheel, compass, voice tubes, telegraphs and every means of navigating the ship.

Below we append extracts from a statement issued by the Secretary of the Navy, which is full of thrilling interest:

"The 'New Hampshire' placed the salvos anywhere she wanted, and when the gunners wished to have some hits on the conning tower and the turret armour in order to observe the effect, they had no trouble, placing the shots at from ten to twelve thousand yards range at just the point desired.

"A few projectiles were directed against the masts, so as to show what would happen to the exposed communication systems.

"An inspection of the vessel after the firing showed immense holes which had been ploughed through from one side to the other, many of them being below water, and any one or two of them being sufficient to make the vessel a total loss. The armour of this vessel was unable to withstand the impact at the very great range at which we fired, and the battleship was a total loss after the first two salvos were directed at her.

"All the officers of the fleet were deeply impressed with the accuracy and the great destructive effect of the projectiles. All the manikins which were placed at the guns representing the crews were dreadfully cut to pieces, and the fumes and fire left by the passage of high explosive projectiles would have destroyed every living thing. The bulkheads in places were like sieves due to the action of high explosives, and all the compartments below were completely riddled.

"It was remarkable to note the enormous power of some of these projectiles, which at 12,000 yards went through the heaviest armour and continued their work of destruction inside of the vessel. This practice has demonstrated beyond doubt the immense value of the long range firing we have been having for the last two years, and shows that our methods of training are positively the best.

"There was no doubt that the 'Texas' was a total loss very shortly after the firing began, and all hopes of raising her were given up. There are a dozen places where holes from four to six feet in diameter go right through from side to side, cutting away decks, beams, bulkheads, stanchions and armour as if they had been made of paper.

"The under water hits, of which there were a great many, did the most damage, and the fact that the vessel sank at the second salvo of high explosive projectiles prevented many fires that would otherwise have been started. As it was we had a roaring furnace on the gun deck in two different places and in the conning tower, which the two fire tugs got under control after an hour's effort.

"The upper works were absolutely riddled. There was not a single halyard or a means of communication left. The chart house was a mass of splinters after the first projectile, and the decks were cut through as if an enormous pair of shears had done the work.

"One or two salvos from any one of our dreadnoughts will accomplish the same destruction. Of the salvos which were actually directed at the target the percentage of hits at that great range was away beyond expectation. The spotters have for the first time gained the necessary information which cannot be learned by firing against anything but a real vessel."

Scientific American.

MILITARY NOTES⁽¹⁾.

BRITISH EMPIRE.

Home.

OFFICERS' TRAINING CORPS; CERTIFICATES "A" AND "B."—The Report on the examinations held in May, 1911, for cadets of the Senior and Junior Divisions of the Officers' Training Corps has now been issued.

The number of successful candidates shows some falling off, both in "Certificate A" and "Certificate B."

As regards the former, the Report notes a certain failure on the part of candidates to grasp the situations described, a defect which, as is pointed out in the following remarks by the Director of Military Training, can be largely remedied by training:—

"It is of interest to note that a comparison of the annual inspection reports with the results of the examination tends to show that contingents which have paid special attention to the training of their section commanders are most successful in the examination.

"Commanding officers must remember that the efficiency of a contingent depends to a large extent on that of its non-commissioned officers, and that, for cadets, the first step towards being an efficient company officer is to be an efficient section commander. One of the objects of the Officers' Training Corps is to start cadets on the way to become officers."

In the reports which follow the questions set are very fully discussed and solutions of difficult points are offered, the difficulties being no doubt suggested by the nature of the answers sent in.

For instance, in the Report for May, 1911, p. 39, the question of artillery fire, as it affects the smaller units of infantry in an advance, is carefully gone into; and in the same Report a solution of a tactical problem is worked out on a map. Organization is treated on somewhat novel lines, the questions being so framed as to call attention to the intimate connection between tactics, administration, and organization.

This system of fully discussing the questions set is a distinctive feature of the Reports on the examinations of the O.T.C.; each Report constitutes, in fact, a very useful little study of elementary tactics. Those issued since May, 1910, form a more or less connected series, and are to be recommended for careful study by prospective candidates and junior officers of the Territorial Force.

Dominions.

AUSTRALIA.—Major-General Sir J. C. Hoad, K.C.M.G., Chief of the General Staff, died on the 6th October.

CANADA.—H.R.H. The Duke of Connaught was installed as Governor-General of Canada on the 13th October. Colonel Hughes has been appointed Minister of Militia and Defence.

⁽¹⁾ Includes notes regarding important political events in foreign countries.

British Empire—continued.

NEW ZEALAND.—The army estimates for 1911 amount to £400,000 for 30,000 Territorials and 35,000 Senior Cadets.

Rifle Clubs have been brought under the direct supervision of the military authorities. Members of these clubs are now under the obligation of performing a prescribed course of musketry laid down by regulation. Members between the ages of 35 and 55 are to be enrolled into a second reserve.

India.

ABOR EXPEDITION.—In addition to the troops detailed in the September JOURNAL, a machine gun detachment of the Assam Valley Light Horse Volunteers forms part of the Abor Expeditionary Force.

Heavy rains and an unusual flood in the Brahmaputra during the second week of October retarded the final preparations for the advance at the base of Kobo.

The concentration at the base was duly carried out, and the health of the troops is reported good.

The Ledum column started from Kobo on the 18th October, and the main column marched subsequently for Pasighat, the advanced base, where it arrived on the 25th October, on which date no serious opposition had yet been met with.

In addition to the Abor Expedition and the mission sent to the Mishmi tribes, with a view to exploring the country, the Government are sending a small political mission escorted by Military Police, under an experienced political officer, to go up the Subansiri River to the hill Miri country, and penetrate as far as possible, and enter into friendly relations with the tribes.

NORTH-WEST FRONTIER.—Under the Amir's orders all the outlaws have been turned out of the Afghan district of Khost where they have hitherto been harboured close to the Waziristan border; they have been forbidden to settle near the British frontier.

The reorganization of the Border Military Police and the measures to improve the defensibility of the border against frontier raids were referred to a special committee in July; their recommendations are now before the Government of India.

AFGHANISTAN.—As a result of the general improvement of roads in Afghanistan, it is expected that bullock carts will soon be employed on the main roads in that country. 500 carts of the Indian Army Transport pattern are being made at Kabul.

THE MILITARY DEFENCE OF THE EMPIRE.

Extracts from the Report of the Committee of the Imperial Conference convened at the War Office in June, 1911.¹

(C.)—EXAMINATIONS FOR THE PROMOTION OF OFFICERS OF THE PERMANENT FORCES OF THE DOMINIONS.

The following Memorandum by the General Staff was laid before the Committee:—

A short history of how the Overseas Dominions have gradually adopted, for officers of their permanent military forces, the same examinations for pro-

(1) Sub-heads A, B, and E of this report were published in the September and October numbers of the JOURNAL.—Ed.

British Empire.—continued

motion as those laid down for Officers of the British Regular Army, is set forth hereunder.

In order to show the progress that has been made in those examinations since their adoption, a table of results is attached, Appendix (C).^{*} For the purposes of comparison, this table also includes the results of the examination of officers of the British Regular Army.

Canada.

2. On the 10th September, 1903, a despatch was received from the Governor-General of the Dominion of Canada on the subject of the examination of officers of the Permanent Forces for promotion. In it Lord Dundonald expressed a desire that officers of the Permanent Forces of Canada should undergo the same examinations for promotion, and at the same time, as those laid down for Officers of the British Regular Army.

This request was agreed to, and papers were forwarded on the 14th October, 1903.

At this time the examinations of lieutenants and captains were almost entirely theoretical.

1904. The syllabuses for the examination of officers of the British Regular Army, which had undergone revision and assumed their present lines, came into operation.

Canada adopted this revise.

1905. At the request of the Government of the Dominion of Canada, arrangements were made for the candidates' answers to the papers of questions sent out for use at the May examination, to be sent home for correction by examiners employed by the War Office, Canada bearing the extra expense involved thereby.

On the 8th May, 1905, Canada informed the War Office that the Board of Examiners (Canada) had been authorised to substitute for any question in the examination papers that did not come within the scope of the knowledge of an officer of the Canadian Permanent Force a question similar in meaning and extent, but which might fairly be said to come within that scope. A copy of substituted questions, together with the necessary books and a reference to where the correct answers were to be found, to be forwarded to the War Office with the candidates' work.

1907. At the request of the Chief of the General Staff, Canadian Militia, alternative questions were set by War Office Examiners in the paper on Military Law (d) (ii). Substituted questions on papers dealing with Organization, Administration, etc., were still being set by the Board of Examiners, Canada.

This latter arrangement did not work very well.

1909. This was pointed out in a letter to Canada, forwarded through the Colonial Office, dated 12th August, 1909. It was suggested that any substituted questions in a paper (other than Organization and Administration) set by the Board of Examiners in Canada should be marked by them, and the results forwarded to the War Office for compilation with the results in other subjects. It was also suggested that the paper on Organization and Administration (d) (iii) and Army Medical Organization in Peace and War should be set entirely by the Canadian

^{*} The Appendices are not reproduced.—ED.

British Empire.—continued

military authorities, in which case those two papers would no longer be sent out from War Office for the use of officers of the Canadian Permanent Forces.

In the reply, Canada requested that the system of setting and marking examination papers should be given a further trial in December, 1909.

On the 14th October, 1909, the Canadian authorities were informed through the Colonial Office that the Army Council were willing to give the system a further trial.

It was pointed out, however, that—

- (1) It was impossible to conduct satisfactorily the examination in Organization and Interior Economy laid down for officers of the (British) regular army when applied to officers of the Canadian Permanent Forces.

The subjects and subheads referred to were subhead (iii) of subject (d)—Organization and Administration, subject (h), lieutenants, R.A.M.C., Organization, Administration, and Interior Economy of the Royal Army Medical Corps, subject (i), lieutenants A.V.C., Organization, Administration, and Interior Economy of the Army Veterinary Corps.

Army Medical Organization in Peace and War—Majors of the Royal Army Medical Corps.

- (2) The War Office Examiners had repeatedly represented their inability to deal satisfactorily with answers to such questions written by Canadian officers.

It was suggested that the Army Council would undertake the examination of officers of the Canadian Permanent Forces in all written subjects and subheads, except those mentioned above. The papers were to be identically the same as used for officers of the British Regular Army, with alternative questions in Military Law (d) (ii).

The papers enumerated above to be set entirely by the Canadian Militia Council. Specimen papers in these subjects set by the War Office were to be sent out to Canada (as soon as printed) **for the purpose only** of indicating the standard which it is considered desirable to maintain.

The result of the examination in those subjects, with the remarks of the Examiners, to be sent home for compilation in the report on the examination published by the War Office.

It was considered that, if the above method was adopted, the necessity of Canadian military authorities setting alternative questions would be avoided.

Canada agreed to those proposals coming into operation after the December, 1909, examination.

Another point arose in December, 1909, with reference to the Army Service Corps papers in subject (g), owing to the War Office examiner not being familiar with local conditions in Canada; but this was subsequently arranged by sending out the papers confidentially some time beforehand, and allowing the military authorities of Canada to substitute questions for any not considered suitable for officers of the permanent force, employing their own examiner to set and correct the questions so substituted, and forwarding the marks allotted to the War Office.

This arrangement is working satisfactorily.

British Empire—continued.

1910. For the December, 1910, examination, the Canadian military authorities adopted the examination paper in subhead (d) (iii), and subjects (h) and (i). No candidates took up the two latter papers.

Australia.

3. On the 8th July, 1909, a despatch was received from the Governor-General of the Commonwealth of Australia, asking if the Army Council would be prepared to make the same arrangements for examining the officers of the permanent forces of the Commonwealth as were made in the case of the Canadian Permanent Forces. The Army Council replied, on the 26th July, 1909, that they would be very pleased to make similar arrangements, but stated that the then existing arrangement by which the President of the Canadian Examining Board was empowered to substitute questions for any not considered suitable in the papers of questions sent out from the War Office was not altogether satisfactory, and a new arrangement was under consideration.

On the 6th October, 1909, a letter was forwarded through the Colonial Office, stating that the Army Council fully recognised the principles underlying the proposals of the Governor-General of the Commonwealth of Australia, that the military education of officers of the permanent military forces throughout the Empire should be as far as possible assimilated. They were prepared to examine officers of the permanent forces of Australia in all the written examinations with certain exceptions—(the conditions mentioned in letter *re* Canada, dated the 14th October, 1909, were set forth).

These conditions were accepted, and the system is working satisfactorily.

New Zealand.

4. On the 20th October, 1910, a despatch was received from the High Commissioner for New Zealand asking the Army Council to forward papers for the examination of officers of the permanent forces of New Zealand.

The Army Council replied on the 28th October, 1910, that they would be pleased to forward papers under the same conditions as ascertained to Australia.

No officers have yet been examined, but it is anticipated that some will attend the examination in May, 1911.

On the 14th December, 1910, Colonel Heard, who had taken up his appointment as D.M.T. in New Zealand, wrote that, as the Organization of the military forces of that Dominion will be modelled on that in England, there was no reason why the officers of the New Zealand permanent forces should not take the same paper in (d) (iii) as officers at Home, and asked for reconsideration of decision of the Army Council not to set the paper in (d) (iii). As regards (h) and (i), there were no officers of the R.A.M.C. or A.V.C.

The Army Council replied that they would be pleased to reconsider their decision.

Examination for Tactical Fitness for Command in Canada, Australia and New Zealand.

5. In 1910 the examinations for Tactical Fitness for Command were revised, for officers serving in the United Kingdom, whereby the paper for Examination in Part I, Appendix XII, King's Regulations, is now set under arrangements made by the War Office. The offer to extend this system to officers serving abroad and to officers of the permanent

British Empire —continued

forces of the Oversea Dominions was made, and was well responded to in the first examination held in December, 1910.

It may be added here that the Government of India have also quite recently decided to adopt our examinations entirely.

6. The Remarks of the Director of Military Training in the "Report on Examinations" have of late been considerably amplified. A supply of those Reports is made to the Oversea Dominions with a view to assisting instructions.

Local Sections, General Staff.

7. Frequent correspondence with a view to attaining uniformity of standard takes place between the General Staff at the War Office and the local sections of the Imperial General Staff, and the greatest harmony prevails.

The papers themselves are now forwarded direct to the local sections of the General Staff in the Oversea Dominions, thereby saving time. During the past year officers of the Australian, Canadian, and New Zealand forces have been attached to the branch of the General Staff under the D.M.T. at the War Office, in order to make themselves familiar with the working of the machinery of that Department. Colonel Heard, before taking up his appointment as D.M.T. in New Zealand, also attended for this purpose.

Certain changes have been made in the regulations relating to the examination of officers for promotion. Those changes have been explained to each of the Oversea Dominions by circular letter.

Summary.

8. From the above, it will be seen that very real effect has been given already to the proposals made at the Colonial Conferences of 1907 and 1909, in which it was agreed that the education of officers was the bedrock of the formation of the Imperial Organization. It is hoped that the officers of the permanent forces of the Commonwealth of Australia will shortly take the paper set in (d) (iii) (Organization, etc.) for officers of the British Regular Army, as has already been done in the case of officers of the permanent forces of Canada and New Zealand. It may then be said that all the Oversea Dominions will have adopted our examinations almost in every detail.

Considering the short time in which this has been brought about, it may be considered that very satisfactory progress has been made towards uniformity of education of officers throughout the Empire.

Conclusion.

The Committee consider that satisfactory progress has been and is being made to give effect to the proposals regarding the education of officers throughout the Empire which were agreed to at the Conferences of 1907 and 1909; and they desire to record their opinion that the action taken on these proposals has already resulted in a marked improvement in military education.

British Empire —continued

(D.)—COURSES OF INSTRUCTION IN THE UNITED KINGDOM AND INDIA OF OFFICERS OF THE OVERSEA DOMINIONS.

The following Memorandum by the General Staff was laid before the Committee:—

As regards the attendance of officers of the Forces of the self-governing Dominions at schools of instruction in the United Kingdom, much consideration has been given to the question by the War Office. Heretofore the majority of such attachments have been arranged by High Commissioners direct with the Commandants of the schools of instruction and General Officers Commanding concerned. This method was found to be unsatisfactory. A committee has recently considered the whole question of the attachment of officers of the self-governing Dominions and Colonies to schools and units of the Regular Army.

As a result of this Committee's recommendations, it is proposed that all applications for the attachment of officers for instruction, etc., should be addressed by High Commissioners to the Secretary, War Office, in the first instance. The Branch of the War Office concerned will then advise upon such attachments, and draw up the necessary programmes. Arrangements with schools of instruction and commands will be made by the War Office, and High Commissioners will be notified accordingly.

On the completion of a course of instruction a report on each officer will be rendered by the War Office to the Government concerned through the prescribed channel of correspondence.

2. As the Government of India have concurred generally in the proposals made in the Memorandum on loans, attachments, interchange, etc., it is presumed that similar arrangements will be made in the case of officers of the Dominion Forces sent to India to undergo courses of instruction in that country.

3. With reference to paragraph 9 of the Memorandum on the subject of loans, attachments, and interchanges, in order that a suitable programme of work may be drawn up for the instruction of attached or interchanged officers of the self-governing Dominions, it is desirable that the War Office should be informed as to what duties such officers will be required to perform on return to their own countries. To enable suitable programmes to be drawn up for each individual, such information should be furnished when the application is submitted for the attachment or interchange, in addition to the information specified in the above-mentioned paragraph.

4. It should be borne in mind that in the United Kingdom the year is divided into two periods for training purposes. The first period, "individual training," consists of the four winter months, November, December, January, and February, and is primarily employed in the individual training of all ranks to enable them to take their places in their units. The second period, "collective training," lasts from the 1st March to the 31st October. The latter period is devoted to perfecting the training of units to enable them to take their places in the higher formations of the Army, and to training these formations themselves. It commences with squadron, battery, or company training, which is followed by training in the next highest formation, and so on until it culminates in combined training of all arms in manoeuvres or tactical exercises.

It is therefore recommended that all attachments and interchanges should be so arranged as to enable officers to obtain the advantage to be derived from a progressive course of training.

British Empire—continued

5. In the case of officers of the self-governing Dominions sent home on the interchange system, it should be observed that these officers temporarily fill definite positions in the Home Army, for which they receive certain rates of pay. The duties and responsibilities appertaining to these positions, whatever they may be, are definitely fixed. It is therefore difficult to arrange a suitable programme of instruction for them without disorganizing to some extent the training of the unit to which they are posted on interchange. In the case of attached officers this is not the case, as they are supernumerary to the establishment, and they can therefore be spared to attend such courses, etc., as may be deemed fit, without interfering with the unit to which they may be attached.

Conclusion.

The Committee consider that the arrangements made are satisfactory.

(To be continued.)

FOREIGN POWERS.**BELGIUM.**

MOROCCAN CRISIS.—Owing to the more favourable turn taken by the Franco-German negotiations, the military activity in Belgium has lessened. The remainder of the 1909 class have been allowed to return home on unlimited leave, and the state of affairs along the Meuse defences may be considered as normal. It is known, however, that the military authorities are considering several schemes which, if the Belgian Parliament will vote the necessary funds, would put the army on a far more satisfactory basis.

NEW RAILWAY.—The newspapers announce that an agreement has been definitely drawn up for the construction of a new railway between Brussels and Aix-la-Chapelle, via Louvain, Tongres and Vise; this will lessen the distance between Brussels and Aix by about 21 miles. There are strong commercial reasons for the construction of this line, but the project has also an important strategic aspect. The line is outside the range of the Liège forts, and will provide direct railway communication between Belgium and Germany north of the Meuse defences. Newspapers estimate that the new line will take four years to construct.

CHINA.

DISTURBANCES IN SSU-CH'UAN.—A serious outbreak occurred in September near Ch'eng-tu, the capital of Ssu-ch'uan. Its origin lay in local opposition to the Hu Kuang railway agreement, concluded by the Central Government with England, Germany, France, and America, in May, 1911, by which each of the four nations equally participate in a loan of £10,000,000 for the construction of railways in Ssu-ch'uan, Hu-Pei, and Hu-Nan. H.M.S. "Widgeon" was moved up to Chia-Ting Fu, situated on the Min River, some 80 miles south of Ch'eng-Tu, and at the end of September gunboats of other nationalities were hurried up to Chung-King. The movement did not, however, appear to be anti-foreign in its nature, but to be directed solely against the Government.

Troops of the 8th Division at Wu-Ch'ang were moved into the disturbed area.

In October the rebellion in Ssu-ch'uan was still smouldering, but neither side seemed to be taking very active measures. A missionary

China—continued.

telegram from Cheng-tu stated that the estimated total of those killed in the disturbances was 10,000; 2,000 of whom were soldiers and the remainder revolutionaries.

An Edict has been issued in Peking transferring Chao Erh-feng, the Acting Viceroy, to his old post of Warden of the Marches. Tsen Chun-hsuan, who has a reputation for ruthlessness in quelling disorders, has been formally ordered to proceed to Ssu-ch'uan to replace Chao as Viceroy.

(For Revolution in China, see page 1473).

RAILWAYS.—The *London and China Telegraph*, (4th September), reported that the first train had been run over the entire length of the Chinese section of the Canton-Kowloon Railway, to test the line. This railway was to have been opened for through traffic at the beginning of September.¹

An Imperial Edict of 11th August, 1911, sanctioned the construction of a railway between Kuei-Hua-Ch'eng, in N. Shan-hsi, and Pao-T'ou-Chên in Mongolia, a distance of 100 miles. Pao-T'ou-Chên is distant about 7 miles from the Yellow River, and is an important centre for the wool trade and also for coal. When this line is constructed it is likely that steamer communication will be established on the Yellow River between Pao-T'ou-Chên and Ning-Hsia in Kan-Su. This railway will be a branch of the Peking-Kalgan railway extension, which will ultimately reach Kuei-Hua-Ch'eng.

It was intended to open the Antung-Mukden line to through traffic on the standard gauge on the 3rd November. It is estimated that the time in transit between Antung and Mukden will be about 9 hours. The bridge over the Yalu River is now completed and a new railway station is in course of construction at New Wiju on the Korean side.

FRANCE.

FRENCH WEST AFRICA.—During August and September the Manus and Liberians on the Ivory Coast-Liberia frontier, gave some trouble by attacking French natives. A small punitive expedition was sent to the district and drove back the raiders, but during the operations Captain Hequet and a French administrator were killed. The Governor-General of West Africa has sent reinforcements to the Liberian frontier.

It is announced that the Colonial Office has authorized a supplementary credit for the purpose of raising auxiliary camel corps in Upper Senegal and Niger and Mauritania. It is proposed to increase the establishment of the camel company at Timbuctoo by 60, and that of the company at Kiffa by 32 men, recruited from Moors and Touaregs, who will thus be trained to military service.

FRENCH EQUATORIAL AFRICA.—Major Hilaire continued during August his operations for the pacification of Wadai. He penetrated the mountainous Kodoy country in North Wadai and inflicted a defeat on a mixed force of Kodoys and partisans of Dudmurrah.

FRANCO-GERMAN AGREEMENT.—The negotiations on the subject of Morocco were finally concluded on the 2nd November. That part of the agreement which concerns Morocco only was initialled on the 11th of October; briefly stated this part of the agreement assures the political predominance of France in Morocco, while providing safeguards for Ger-

(1) The Canton-Kowloon Railway was opened on the 5th October, 1911.

France—continued.

man economic interests. The second part of the Treaty deals with the compensation which Germany is to receive for her "désintéressement" in Morocco; this is afforded by a "rectification" of the southern and eastern Cameroons frontier in such a way as to give Germany access to the Congo at the mouth of the Sanga River, and to the Ubangi at the mouth of the Lubai River, while on the south Germany secures a few miles of coast line north of Libreville and the hinterland of Spanish Guinea. On the other hand, France receives a portion of the "Duck's Beak" of the Cameroons on the left bank of the Shari, and on the right bank of the Logone, as well as the right of access to the French Congo by the Valley of the Benue. Further details of the Treaty will be given in the next number of the JOURNAL.

MOROCCO.**French Sphere.**

The work of pacification is reported to be proceeding satisfactorily, especially in the neighbourhood of Sefrou. No new French posts have been created, nor have any fresh military operations been undertaken.

Direct wireless communication between Fez and the Eiffel Tower, Paris, was opened on October 12th.

Spanish Sphere.

LARACHE ZONE.—It is believed that the troops in the Larache-Alcazar zone now number 4,000 to 5,000 men.

On August 20th 2 companies reached Alcazar from Larache to reinforce positions occupied at Telatsa and Raisana, and to help to secure the communications by the establishment of further posts if necessary. On August 28th, a mountain battery from Cadiz disembarked at Larache.

Work is being carried out on the Larache-Alcazar road by a company of engineers, and it is hoped to make it fit for wheels throughout.

(For operations in the Riff see page 1501).

OTTOMAN EMPIRE.

YEMEN.—Turkish operations against the Imam have ceased and it is even reported that the latter has offered to provide levies for service against Italy. In the Assyr province, the present disposition of troops is 16 battalions at Abha, 6 at Loheya, and 4 in Geezan. The Grand Sherif of Mecca has returned to the Hejaz, but it is announced that when the weather becomes cooler, the regular troops will advance to Sabiya.

BAGHDAD RAILWAY.—Meissner Pasha and four of the engineers of the Baghdad line visited Mosul, Nisibin and Baghdad during June and July. As a result of the surveys it is possible that the main line will proceed direct from Nisibin to Tekrit, with a branch line from Sinjar to Mosul. No construction, however, as far as can be gathered, has yet proceeded east of the Kurd Dagh.

TURKEY AND MONTENEGRO.—Two notes have been exchanged between the Porte and the Montenegrin Legation which constitute a settlement of negotiations between Turkey and Montenegro. In the first note the Porte agrees to bear the expense of the drainage and regularization of the rivers Boyana and Drin, while Montenegro renounces all claim to an indemnity on account of works executed along the shore of Lake Scutari, which have been rendered useless by the lowered level of the water. In the second note the Porte pledges itself to consult the Montenegrin Government with regard to the point of junction between the projected Adriatic railway and the proposed line to Antivari.

Ottoman Empire—continued.

ALBANIANS.—The Malissori Albanians are reported to be dissatisfied at the non-payment of the promised compensation by the Turkish Government, for destruction to their property during the recent insurrection, and to be contemplating a fresh immigration into Montenegro.

Such immigration, if it occurred, would re-open the state of tension which existed between Turkey and Montenegro during the insurrection, and would be especially dangerous at the present juncture.

FRONTIER INCIDENT.—A frontier incident between Turkish and Montenegrin frontier guards is announced to have taken place at Berané, in which two Turkish soldiers were killed and 3 Montenegrins wounded.

PORTUGAL.

ROYALIST RISINGS.—A strict press censorship has been enforced, but it would appear that the royalist forces adopted a more openly offensive attitude during October than has hitherto been the case. The numbers of the force led into Portugal by Captain Conceiro at the beginning of the month were probably not more than 1,500-2,000 men armed with miscellaneous rifles, shot-guns, revolvers, pistols, etc. After various slight skirmishes with the Republican troops, the towns of Vinhaes, Chaves, Guimaraes, Barra and Barrança are stated to have been occupied by the Royalists. The Government sent reinforcements northwards from Aveiro, Oporto, and Lisbon, on October 6th, and was stated at the end of October to have about 8,000 men on the northern frontier. The Royalist forces, after a short stay at Vinhaes, retreated to Verin, near the Spanish frontier, on October 8th, whence they are reported to have moved to Portollo do Homen and to have captured the village of Montalegre on the 17th. They then retreated again to the Spanish side of the frontier.

Arrests to the number of 600 are said to have been made, and domiciliary searches, especially in Oporto, continue.

The press reports that the Government decided on October 12th to dispense with the services of the Carbonarios, a revolutionary force which greatly assisted to establish the republic, but which, as the revolutionary period is now considered to be closed, can no longer be officially recognized.

AUTOMATIC GUN.—The Press reports that the Portuguese Government concluded a series of successful trials with a new automatic Vickers gun, which is stated to fire 1,000 rounds in two and a half minutes.

PERSIA.

POLITICAL SITUATION.—The political atmosphere in Persia remains extremely unsettled and the state of the country and trade routes generally continue to be bad. Improvement in S.W. Persia is hoped for from the recent appointment of Ala-ed-Dowleh as Governor of Fars, but otherwise the Government shows little signs of controlling the anarchical conditions prevailing.

THE EX-SHAH'S REBELLION.—Salar-ed-Dowleh after his decisive defeat by the Government troops under Yeprim Khan on 27th September, south of Zarand (about 70 miles S.W. of Tehran) was pursued to Hamadan, and fled in the direction of Burujird with a small following. Conflicting

Persia—continued.

reports of the ex-Shah's whereabouts have been received; it is probable that he is in Russian territory.

INCREASE OF CONSULAR GUARDS.—To protect British interests in S.W. Persia the Consular guards at Ispahan, Shiraz, and Bushire are being reinforced by the 39th Central India Horse, till such time as the Persian Government regains proper control of affairs. Two squadrons reached Bushire on 26th October, and were to be followed by the remaining two on return of the transports to Bombay.

It is understood that the Russians are also increasing their Consular guards at Ispahan, Kasvin, and Enzeli.

It is reported in the Press that Russia has objected to the proposed employment of 20 Swedish officers to reorganize the Persian army, and has urged the Swedish Court to decline to spare officers for this purpose. The Russian Government has refused finally to withdraw its objection to the employment of Major Stokes for the reorganization of the Gendarmerie.

RUMANIA.

MANŒUVRES.—The manœuvres began on October 5th and were concluded on October 8th. About 40,000 troops were engaged. Captive balloons and aeroplanes were employed in reconnoitring. Other operations were carried out during the same period in the Dobrudja, the Danube flotilla taking part.

ORGANIZATION.—The contemplated formation of a 10th Regular Division is reported in the *Bulgarian Military Review* (*Bojenni Isvestia*) to have now taken place, the new regiments, Nos. 37 to 40, having come into existence on October 1st. Each regiment is provided with a machine gun detachment of 3 guns. The 37th regiment is allotted to the 8th Division, Headquarters, Botoschani; the remainder to the 10th Division at Braila, Tulcea and Bukarest, respectively. Corresponding reserve regiments with similar numbers have been raised and allotted to the same places. Staffs for the two new infantry brigades have also been provided.

SERVIA.

MANŒUVRES.—The Drina Division on the Bosnian frontier was mobilized on October 16th.

This was stated to be a trial mobilization, which would apply to all the other divisions in turn.

Reserve officers, even those living abroad, were recalled to the colours for these manœuvres.

SWITZERLAND.

STRATEGICAL.—The *Neue Zürcher Zeitung* of October 12th, in an article dealing with the road communications leading to and over the Stelvio Pass, expresses its satisfaction with the Austrian fortification of Gomagoi. The newspaper points out that Switzerland's first consideration is her neutrality, and that the blocking of this exit is an advantage not only to Austria but to Switzerland, since it enables the latter to assume the protection of the Umbrail, formerly one of the most dangerous points in the whole country.

ARMY.—The extensive reorganization of the Swiss army on the lines laid down in the Federal Resolution of April 6th, 1911, has now been announced in an ordinance issued by the Federal Council, dated October 10th.

AERONAUTICAL NOTES.

AUSTRIA-HUNGARY.

AVIATION.—A flying meeting, one of the few which have been at present held in Austria, took place at Wiener-Neustadt on October 1st and following days. A special prize for military aviators of the value of £200 was given by His Majesty the Emperor. A contribution of £200 towards the general prize fund was made by the War Office. The Austrian-made Etrich machines were successful in a large number of events. A considerable number of army officers, four of whom won prizes to the value of £900, took part in the various competitions. In spite of unfavourable weather the proceedings went off most successfully; there were no postponements or serious accidents.

FORMATION OF AN ARMY AIR CORPS.—Official regulations have appeared defining the permanent organization of the Army Air Corps (Luftschifferwesen). The corps is placed under the control of the General Staff Section of the War Office, and is to consist of two parts:—

1. An airship and aeroplane division.
2. Fortress balloon detachments.

The airship and aeroplane division is commanded by a staff officer, and is divided into 3 departments:—(a) Service detachments. (b) Workshops. (c) Stores and material.

The duties allotted include:—(a) Study of all aeronautical questions at home or abroad. (b) Experimental trials. (c) Training of personnel. (d) Construction and care of flying machines and airships. (e) Production of training manuals, handbooks, etc. Both officers and men are to be specially selected from other branches of the army.

BELGIAN CONGO.

AVIATION.—A Special Commission has been appointed to study the utilization of aeroplanes for ensuring rapid communication to portions of the colony unprovided with road or river communication. Although £16,000 has been voted as a first subsidy towards this service, no definite scheme has yet been drawn up. Attempts will be made to traverse 750 miles of desert, the posts being 250 miles apart and provided with wireless stations.

GERMANY.

Airships.

THE "L.Z." 9.—The new Zeppelin airship built for the War Office has on her trial trips developed a speed of 21 metres per second, and is thus the fastest airship in the world. She is to carry machine guns.

THE "P.L. II." (or "P. III.")—This airship is to be taken over shortly by the military authorities, when work on the "P. IV" will be commenced. It is said that the Parseval type is now considered to be the most serviceable, and that no more of the "Z." or "M." types will be made for military purposes, though the "M. III." which was burnt at the Imperial manœuvres will be repaired.

SCHÜTTE LANZ.—A successful first flight was made on October 17th by this new type of dirigible, built at Mannheim. She has a wooden framework 430 feet long and 60 feet broad. The propeller has a diameter of 13½ feet. The two engines are each of 250 H.P. The balloon has a

Germany—continued.

capacity of 700,000 cubic feet. She is fitted with wireless telegraph apparatus.

Aviation.

NEW FLYING GROUND.—It is reported that a large extent of land has been acquired at Putzig, on the Bay of Danzig, to serve as an aviation ground in connection with the Imperial shipbuilding yard at Danzig.

AVIATION COURSE.—On the 18th of this month a new course in aviation commenced. Although the numbers attending are purposely withheld from publication, they probably amount to about 20 officers.

NAVAL AERONAUTICS.—As a step towards a naval aviation service the Admiralty is said to have acquired two triplanes of the Albatross type with a view to experimenting with landings on ships.

HOLLAND.

The employment of aeroplanes was a noticeable feature of the recent army manœuvres, and the good results obtained in reconnaissance have induced the military authorities to acquire 3 aeroplanes.

The Minister of War, it is stated, has arranged for special rates of pay for individuals who place their machines at the disposal of the military authorities, or who fly for them.

FRANCE.

The Minister of War has decided to attach to the aeronautical service 37 officers and 40 non-commissioned officers. Of the 37 officers 25 will be attached for aviation purposes.

A depot of aeronautical material has been established at Rheims.

The War Office took over during the past month 8 Blériot monoplanes. Ten officers have now obtained aviation certificates: of these three belong to the artillery, three to the engineers, two to the infantry, and two to the cavalry.

RUSSIA.

At the end of September a new dirigible of 88,300 cubic feet capacity, the "Sokol" (Hawk), built at the Ijor works, was ready and undergoing trials near St. Petersburg.

Another new dirigible, built by Duflon and Konstantinovich, of 88,300 cubic feet capacity, is reported to be ready for trial, and will be named the "Kobchik" (Merlin).

The War Council has fixed age limits for officers employed in aeronautical units. Officers for dirigibles must not exceed 58 years, and aeroplane pilots must not exceed 45 years, and in addition the latter will be medically examined every two years after they attain the age of 35.

Two detachments of aviators were formed to take part in the manœuvres in the Kiev and Warsaw military districts. These consisted of officers trained at Gatchina and Sevastopol by the "Society for strengthening the Fleet, etc." as well as of officers trained at the School of Aeronautics.

Six officers of the General Staff have passed through the aviators' course this summer.

The Tsar has authorized a flag for use by the aircraft of the "Society for strengthening the Fleet by voluntary contributions." The flag is triangular and carries stripes of red, white and blue, and the monogram of the Society.

The feature of the last few months has been the development of aeroplanes at the expense of dirigibles.

FOREIGN PERIODICALS.

NAVAL.

Argentine Republic.

Buenos Aires: **July, 1911.**—The launching of aeroplanes from ships' decks. Proposed suppression of the category of employed men in the Argentine Navy. The nature and importance of the naval battle. Fire control.

Austria-Hungary.

MITTEILUNGEN AUS DEM GEBIETE DES SREWESENS, Pola **No. X. 1911.** The employment of small cruisers. Centrifugal ventilators. Aeronautics in the Navy. Arms and ammunition for fighting airships and aeroplanes. The proposed armoured submarine cruiser. The new British type of battleship. The 16-inch gun in the United States.—**No. XI. 1911.**—The catastrophe to the "Liberté." Progress in naval artillery. Naval strategy. The Naval Budget as sanctioned by the French Chamber. What is the position of aviation in the navy? The wreck of the British Naval Airship. The navy of the Australian Commonwealth. Battle practice in the British navy in 1910. Turret guns and concentration of fire. The new British submarines of the "E" Class.

Chili.

REVISTA DE MARINA. Valparaíso: **August, 1911.**—The Chilean mercantile marine. Study of the corrosion of metals due to chemical action. The new "Telefunken" wireless telegraphy apparatus in the cruiser "Chacabuco."

France.

LA REVUE MARITIME. Paris: **July, 1911.**—A study of labour questions so far as they apply to the Ministry of Marine * (continued in August, 1911). **August, 1911.** A practical study of the procedure to be adopted, from an administrative, judicial, and financial point of view, in appropriations for the public service. **September, 1911.**—The theory of gyroscopic compasses. Translations. The Anglo-Dutch War 1652-1654. Recruiting of naval personnel and composition of crews in various States.

LE YACHT. Paris: **2nd September, 1911.**—Life in the navy (suggestions for rendering service in the navy more attractive). **9th September.**—Permanent naval staffs (pleads for a more continuous tenure of naval staff appointments). **16th September.**—The port of Brest. The "Helgoland" and "Moltke" types. **23rd September.**—Ideas on naval warfare in the XVIIIth century. The Italian battleship "Roma." The minelayer "Cassoni." **30th September.**—The disaster to the "Liberté." Launch of the "Jean Bart" and the "Courbet." The French Diesel motors. **7th October.**—The service of security on board the "Liberté." Launch of the destroyer "Salta." **14th October.**—After the naval manœuvres. Launch of the "Rivadavia." **21st October.**—Auxiliary vessels of a battle fleet. The conquest of Tripoli by Italy. **28th October.**—Fast battleships. The conquest of Tripoli by Italy.

LE MONITEUR DE LA FLOTTE. **2nd September, 1911.**—Concentration of fire. The French naval review of 9th September. **9th September.**—The French naval review. The personnel of the fixed defences. **16th September.**—The French naval manœuvres. Reorganization of the personnel of the French navy. The budget of 1912. **23rd September.**—The accident on the "Gloire." The French naval manœuvres. **30th September.**—The disaster to the "Liberté." The "Jean Bart" and the "Courbet." The salvage of submarines. **7th October.**—The powder used in the French Navy. **14th October.**—Submarine mines. The disaster to the "Liberté." **21st October.**—The flooding of magazines. The enquiry

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France—continued.

into the "Liberté" disaster. **28th October.**—The report of the commission on the "Liberté."

LA VIE MARITIME. Paris: **10th September, 1911.**—Our naval forces (with plan of the Toulon review). The fortnight in Germany. The recruitment of the French navy. The naval programme (M. Nail's report). **25th September.**—The French naval manoeuvres. The fortnight in Germany. The Italian scout ships. **10th October.**—The disaster to the "Liberté." The accident to the "Gloire." The launch of the "Jean Bart" and the "Courbet." **15th October.**—The "B" powder in the Navy. The chief command. Notes on boilers. After the disaster to the "Liberté."

LA MARINE FRANÇAISE. Paris: **August, 1911.**—Let us be on our guard! (an article on the international situation) A protest against naval megalomania. The Moroccan question and the possibility of war. Notes on the administrative organization of naval arsenals.† The preliminary stages of a naval battle (translated from the German). The reorganization of naval workshops before Parliament. **September.**—The Naval Review. Our naval illusions and our duties. The composition of our Fleet.* Study of the administrative organization of naval arsenals.†

Germany.

MARINE RUNDSCHAU. Berlin: **October, 1911.**—The development of the submarine. Naval officers and the study of international law. The British Imperial Conference of 1911. The conversion of merchant vessels into warships on the high seas during war. The French naval manoeuvres of 1911. **November, 1911.**—Japanese General Staff History of the Naval War, 1904-5. The French naval manoeuvres. The contest for Tripoli. The Italo-Turkish War, 1911. The disaster to the "Liberté."

Italy.

RIVISTA MARITTIMA. Rome: **September, 1911.**—Marine aeroplanes and naval aviation, by Lieut. M. Calderara. (The article deals with experiments over the sea carried out by Ely, Glen Curtiss, and Fabre, with a brief description and criticism of the aeroplanes of the two latter. The author divides aeroplanes for naval work into two categories: namely, small craft launched from and permanently tenders to ships, and large ones entirely independent and incapable of landing on the ships. The former would be employed for tactical reconnaissance, and the latter strategically. Descriptions, illustrated by diagrams, are given of the radii of action under varying conditions, when communicating with ships and when patrolling in connection with coast defences.) The publication of special maps for astronomical navigation, by Prof. Alberto Alessio. The advantages of a "squared map," as compared with maps constructed on other systems is considered. The first reversible internal combustion motors for ships made in Italy (with diagrams and photographs), by Naval Engineer Curio Bernard. High Tensile Steel, by Naval Engineer L. Gusmani.

Spain.

REVISTA GENERAL DE MARINA. Madrid: **September, 1911.**—Suggestions for the education of naval officers. Hints for instruction in aiming. The future of the Russian Navy. Organization of submarine stations in France and other countries.

MILITARY.

Austria.

STREFFLEURS MILITÄRISCHE ZEITSCHRIFT. Vienna: **September, 1911.**—The history of the Russo-Turkish War of 1877-78. † How far is the organization of our smaller tactical units and of our larger

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Austria-Hungary—continued.

formations suitable to the needs of modern war? Notes on the attack on Port Arthur. The new Italian cavalry regulations. The Russo-Japanese War (opinions and criticisms of eye-witnesses). The new conditions of service for N.C.O.'s in Italy. **October, 1911.**—Capture of Sandomierz by the Poles in 1809. The Austrian infantry training for 1911. "Nauticae Res" (a translation from an Italian essay on naval war). Italy and Tripoli (a survey of the situation prior to the war). Two Japanese raids and their consequences. The Turkish operations in Hauran in 1910 (with 2 sketch maps). Communications from the School of Musketry. Foreign notes. Rumania, Italy, Russia. Food supply of Great Britain. Italian naval personnel. Submarines.

DANZER'S ARMEE ZEITUNG.—Vienna: **5th October.**—Count Aehrenthal's policy towards Italy. The struggle for the mastery of the Adriatic and its coasts (review of an article in *Rivista Militaire Italiana*). The Hungarian railways (their capacity for carrying troops). **12th October.**—The war between Italy and Turkey (diary of events, continued in 12th, 19th, and 26th October). The line of communications service in the great manoeuvres in Northern Hungary in 1911. **19th October.**—Austria and the Oriental policy of Italy. Reinforced concrete for military purposes. The Landwehr Budget for 1912. **26th October.**—War Ministries and the Press. Political tendencies in Bulgaria. Performances of Hungarian railways during the manoeuvres.

Belgium.

BULLETIN DE LA PRESSE ET DE LA BIBLIOGRAPHIE MILITAIRES. Brussels: **15th August, 1911.**—The French Army Estimates for 1911* (Summary of expenditure, establishments, etc.) A new Wörth, a picture of a battlefield of to-morrow.† The grand manoeuvres of the French army in Picardy, 1910.† French, German, and Austrian views on fortress warfare.† **31st August.**—French Army Estimates for 1911—continued in 15th and 30th September. A new Wörth.† French, German, and Austrian views on fortress warfare—continued in 15th and 30th September. The grand manoeuvres of the French army in Picardy—continued in 15th and 30th September.

France.

JOURNAL DES SCIENCES MILITAIRES. Paris: **1st September, 1911.**—The freedom of action of the higher commanders† (Macmahon's march to Sedan; political influences). The tyranny of fire-arms† (contends that fire action is essentially defensive). The cost of a war, Chapter II.† (statistics of cost of previous wars). Authority, subordination and methods of discipline, Chapter V.† (How to establish discipline). The problem of promotion in the army. **15th September.**—The "new army" (further remarks on M. Jaurès' scheme for a civic army). The tyranny of fire-arms. § Authority, subordination and methods of discipline. § Dismounted scouts of infantry* (How to organize and instruct infantry scouts). **1st October.**—Command and intercommunication, according to the provisional training manual of September, 1910. The freedom of action of the higher commanders.† Hand grenades. Dismounted infantry scouts. **15th October.**—A historical study of the right to inflict punishments in the French army. The service of intelligence* (A study of the intelligence duties for an army engaged in war). The infantry and the Cadre laws. Indirect fire for infantry machine guns.

REVUE D'INFANTERIE. Paris: **15th August, 1911.**—A German opinion on the advance of infantry under the fire of machine guns. The right wing of the Prussian Army at Rezonville† (continued in 15th September). A

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France—continued.

simpler method of instructing in infantry drill (with many diagrams.)
15th September.—The Japanese in Manchuria.†

REVUE MILITAIRE GÉNÉRALE. September, 1911.—Napoleon in the field (chapter I, character and habits of the Emperor).* The defence of Nancy (deprecates the abandonment of Nancy in a Franco-German War). Studies of the Russo-Japanese War † (13th October to 28th January). Cadre exercises (a tactical scheme for a battalion). Tactics: more letters to a young officer § (recapitulation of past chapters). The doctrine of national defence § (conclusions: deprecates the abandonment of French territory in the first stage of a war). Divisional organization in peace time.

REVUE MILITAIRE DES ARMÉES ÉTRANGÈRES. Paris: September, 1911.—The German army estimates for 1911. Foreign notes: Belgium. China: reorganization of the War Office. United States: General Staff Organization.—Germany: aviation. Holland: difficulties of the militia system.—**October, 1911.**—The military forces of Canada. The Transiranian (railway projects for uniting England and India). Military Notes. Austria-Hungary: new War Minister; the Budget of the Austrian Landwehr; the artillery camp at Hajmasker; allowances for officer airmen. Germany: statistics of punishments. Spain: native battalion in Melilla. United States: formation of territorial divisional districts. Italy conditions for n.c.o.'s.

REVUE D'HISTOIRE. Paris: September, 1911.—The Army of the Orient under Kleber. † Marches in Napoleon's armies. † The campaign of 1813. † The higher command in Prussia from 1809 to 1871. The campaign of 1844 in Morocco. † The war of 1870-1871: the 1st army of the Loire. **October, 1911.**—The Army of the Orient under Kleber. † Marches in Napoleon's armies. † Napoleon and the fortresses in 1814. † Notes on Moltke's plan in 1870. The war of 1870-1871, the 1st Army of the Loire. †

Germany.

MILITÄR WOCHENBLATT. Berlin: 2nd September.—The infantry section as a tactical unit * (compares the teaching of French, Japanese and other infantry manuals). The history of Spain as a world power † (continued in 5th, 7th, and 9th September). Notes from the Russian Army (foreign languages in cadet corps). 5th September.—The Russian General Staff History of the Manchurian War † (Mukden with map). The Japanese provisional regulations for heavy artillery (principles for employment of heavy batteries). The infantry section as a tactical unit † (teaching and practice in the German Army). 7th September.—The Russian General Staff History of the Manchurian War † (21st February to 6th March, 1905). The infantry section as a tactical unit. § 9th September.—Military technical notes (cyclists in various armies). 12th September.—Scharnhorst's achievement in the creation of the Landwehr* (concluded in 14th September). Mountain artillery (value of jointed guns; an example from Chile). The duties of a cavalry adjutant. 14th September.—Changes in the organization and tactics of field artillery* (discusses rôles of field gun and field howitzer—concluded 16th September). The employment of aircraft in the French army (notes from the manoeuvres). 16th September.—The new Spanish military service law. 19th September.—The co-operation of infantry and artillery * (a lecture by the Crown Prince of Denmark; concluded 21st September). The reorganization of Portugal's defence forces. 23rd September.—Hougoumont, 1815, and Geisberg, 1870* (a comparison; concluded 26th September). The lessons of the Texas manoeuvre division for the United States Army * (concluded 26th September). Notes on tactical

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Germany—continued.

schemes and the study of military history. The new Dutch manual for lines of communication. Aeroplanes and dirigibles at the Italian manœuvres. **26th September.**—Notes on the French field artillery, by General Rohne (artillery in the manœuvres of 1910; General Percin's views). **28th September.**—The late General von Caemmerer (obituary notice). The duties of a cavalry brigade major.—**3rd October, 1911.**—The surprise of Schweidnitz by Loudon on the night of the 1st October, 1761. Influence of danger on the gun detachments. Notes on the Japanese Army. **5th October.**—Notes on the French Army.* The "redif" organization of the Turkish Army. **7th October.**—Notes on the French Army. § The duties of a cavalry adjutant. † Notes from the Russian Army. † **10th October.**—The influence of the supply of artillery ammunition on the composition and leadership of units.* Aviation in the French Navy. Notes from the Russian Army. § Apparatus for checking errors in aiming the rifle (with diagram). **12th October.**—The Italo-Turkish War.* Influence of supply of artillery ammunition on the composition and leadership of units. § **14th October.**—The Russian General Staff History of the Russo-Japanese War. † The strategical and tactical importance of the marsh region of The Pripiet in Russia. **17th October.**—Time as a factor in war.* The Italo-Austrian frontier. The Greek Army. **19th October.**—Time as a factor in war. † **21st October.**—The "offensive defensive," by Major Immanuel.* The rates of promotion in various arms. **24th October.**—The "offensive-defensive" § The Italo-Turkish War, 11. † **26th October.**—The British Territorial Army at the end of the training under canvas in 1911. Training problems in the Russian Army.* **31st October.**—Casualties on the march in the cavalry 1870-1871. The autumn manœuvres of the Swiss Army.

JAHRBÜCHER FÜR DIE DEUTSCHE ARMEE UND MARINE. Berlin: **September, 1911.**—The position of military aviation in 1911. Anti-militarism. Practice with naval guns, by General Rohne. The question of promotion in the German Army. The new method of fire with machine guns (an anticipation of regulations soon to be issued). Russian views on low trajectory siege guns.

INTERNATIONALE REVUE. Cologne: **September, 1911.**—Germany: a French view of the 1910 manœuvres. France: The great manœuvres in France. The French African troops. The higher command of the French army. Italy: the army manœuvres in 1910; weak points of the manœuvres of the 1st Army Corps. United States: development of the navy. **FRENCH SUPPLEMENT.** The pursuit in the Wars of Frederick the Great and in modern war. Advantages and disadvantages of shields for machine guns. **October, 1911.**—Belgium: new infantry training. Germany: recruit training, distribution of machine gun companies, naval notes. France: special reserve officers, regulations for cavalry machine guns, proposals of the new War minister. Italy: military education, new conditions for N.C.O.'s. Japan: manœuvres in 1911. Austria-Hungary: recruiting, infantry pioneers, mechanical transport trials. Russia: growth of the navy, development of the militia. Turkey, irregular cavalry. United States: submarines. **SUPPLEMENT, (133), October.**—The French Navy. **FRENCH SUPPLEMENT (151).**—The tactics of the German artillery. *Nauticus*, 1911. Japanese Corea: importance of studying military history. The naval war in the Far East, 1904-5.

Italy.

RIVISTA MILITARE ITALIANA. Rome: **16th August, 1911.**—The jurisdiction and administration of the military levy.* Disembarkations. (The

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Italy—continued.

article points out the artificial character of landings at manœuvres, whether on a large scale or in the nature of raids, as such landings are seldom opposed by force or by the hostility of the inhabitants. Naval experts state that a landing on a coast, protected by torpedo boats and submarines, together with wireless telegraph communication, is practically doomed to failure, and history seems to endorse the fact. (The delicacy and difficulty of oversea expeditions are clearly brought out in the article). The psychological aspect of battle and notes on the advance of the firing line. (An interesting article). The island of Sicily.[†] Cavalry duels, and the great importance of this arm in modern warfare. (An interesting article, in which the author gives his views on the employment of cavalry and the great value of that arm. He would have the Italians compare the position of their cavalry in opposition to that of Austria, with that of the French in face of the German cavalry). The importance of modern colonial expansion. Military "ski-ers." (Some suggestions for improving the organization and the system of training Alpine troops on ski.) **16th September, 1911.**—Jurisdiction and administration of the military levy, by Eugenio Mercurio (continuation and conclusion). The military schools of Parma and Modena, by Capt. B. Cesare. Some reflections on the findings of the Committee of Enquiry on these two schools, with suggestions. The aspect of the modern battle, by Lieut. E. Fumo. A study of the battlefield of to-day, with special reference to the fighting in Manchuria. Fencing in the army, by Capt. P. Dallari. Considerations as to the value of fencing in the army. The employment of infantry in the light of recent wars, by Lieut.-Colonel C. Cristinziano (to be continued). The effect of small-bore rifles and quick-firing guns on infantry tactics as exemplified by the late S. African War and the Russo-Japanese War. Italian women in the national regeneration, by Capt. R. Corselli. Sicily, by Capt. V. Pappalardo. Continuation of the study of its geography from the military standpoint. War and manœuvres, by Capt. G. Porta. Some reflections on the Japanese imperial manœuvres of 1910. The new and the old in military art, by Lieut. B. Riccardo. The soldier, by Capt. A. Dell'Oro Hermil. (Some suggestions for educating him).

Japan.

THE JAPANESE ARMY JOURNAL (KAIKOSHA Kiji). No. 429—July, 1911.—Artillery Concentration or dispersion. The encouragement of technical study by young engineer officers. The spirit of the infantry charge. Currency issued by the Army at the seat of War. The Austrian field artillery observation waggon. Military aeronautics in France and Germany. The new German infantry pioneer manual. Forthcoming (1911) manœuvres in Germany. The attachment of officers to arms other than their own in the Austrian army.

Switzerland.

REVUE MILITAIRE SUISSE. Lausanne: August, 1911.—The history of the Regiment of Swiss Guards in the service of France, 1567-1830. § Experiments in travelling over rough ground with Krupp guns. Army cavalry. Passage of the col de Marchairuz by a brigade of artillery. Foreign notes: Switzerland; Portugal (The reorganization of the army); Germany; Austria; France (The reorganization of the system of chief command.) **September, 1911.**—Military panorama sketching. Pack transport of the Swiss "mountain infantry." Foreign notes: Germany; United States; France; Norway. **October, 1911.**—Panorama sketching. Aeroplanes at the manœuvres of the 1st Army Corps. Foreign notes: Switzerland; Germany; France; Italy; Portugal.

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CORRESPONDENCE.

A POSSIBLE EGYPTO-PERSIAN RAILWAY.

(To the Editor of the R.U.S.I. Journal.)

Sir,—I venture to send you a few lines on a scheme which, though somewhat incompletely handled yesterday at the Royal United Service Institution by Mr. Drummond Black, has in it a *souffçon* of promise.

Futile it may be to comment on the fatuity and ignorance of the ordinary newspaper reporter; but, indeed, as the misleaders of public opinion, they lay themselves and those who employ their incompetent services open to severe condemnation. Having given some study and thought to railway communication between East and West, I ventured yesterday to join in the discussion on Mr. Black's paper. If I said anything at all that was worth listening to, that which I am about to repeat and expand here seems to me to merit that expression. Bear in mind that ten minutes is the time allowed, and each speaker is adjured (by the Chairman) to keep to the point—an adjuration which is frequently ignored by certain *habitués* of the R.U.S.I. Theatre.

Going back to the days of the Great Oriental monarchies, on whose history Canon Rawlinson is the standard authority, we find that regular communication existed between Egypt and the monarchies of the Tigris and Euphrates valleys. Nay, more, if I mistake not, the power of the Assyrian or Persian arms made themselves felt in the land of the Pharaohs. In those days, no doubt, the main connecting route between Mesopotamia and Egypt was through Syria, though I think it not improbable that exploration and research would show that caravan routes across the so-called Arabian desert—following more or less the line which an Egypto-Persian railway might take—were then in use. Under any circumstances there is reason to believe that a railway starting from the Egyptian coast can be made to any selected point in the Euphrates valley or on the Persian Gulf. The question is, what will make it worth while to construct such a line? To that yesterday I suggested the briefest form of reply, viz., the development of Northern Africa on the one side and of Mesopotamia and Southern Persia on the other.

Let me develop that statement rather more clearly here. Northern Africa has passed or is passing into the hands of enlightened and progressive European Powers. Morocco, Tunis, Tripoli, and the Cyrenaica are, or soon will be, French and Italian. The rumour of the impending British annexation of Egypt is in the air. Premature, doubtless, but there will be no relaxation of the British hold on Egypt, the prosperity of which country under British guidance is one of the current themes of the hour. We have then the whole north of Africa growing in wealth and resources. We have the Cape to Cairo railway and the Hejaz line, both possible feeders of any Egypto-Persian line. We have the through waterways of the Mediterranean and the Red Sea, converging on Akabah and Port Said, both ports which an Egypto-Persian line would touch.

Now turn to the Persian end of this possible railway. Surely none of us suppose that because Sir William Willcocks has withdrawn from participation in the scheme for re-irrigating Mesopotamia therefore the death-knell of that scheme is sounded to the crack o' doom? Will Ger-

many, having completed its railway to Baghdad, and Great Britain having constructed the Koweit-Baghdad section of the same railway system, be content to let the best fertile plains of Mesopotamia rest untilled? Will the cereal, oil, mineral, and other resources of Southern Persia be allowed under the stimulus of British, German, and Russian ambition, rivalry, and activity to remain unutilized? That is not very likely. Therefore the time is coming when the development of provinces which have long groaned under Moslem misrule will again flourish as they flourished before either Christendom or Islam were heard of. Prosperity means railways. But whether an Egypto-Persian railway will be an "all-red" route, as Mr. Black sanguinely surmises, is more than problematical.—I am, Sir, &c., A. C. Yate.

The Athenæum, Pall Mall, S. W.

19th October, 1911

NAVAL AND MILITARY CALENDAR.

OCTOBER, 1911.

- 4th (Wed.) Occupation of Tripoli by the Italians after bombardment.
- 7th (Sat.) Launch of the first-class battleship "Gangout" from the New Admiralty Yard, St. Petersburg, for the Russian Navy.
- 9th (Mon.) Launch of first-class battleship "King George V." at Portsmouth.
- 10th (Tues.) P. & O. steamer "Medina" commissioned at Portsmouth as a Royal Yacht, to convey the King and Queen to India.
- 13th (Fri.) H.R.H. The Duke of Connaught installed as Governor General of Canada.
- 14th (Sat.) Launch of the first-class battleship "Leonardo da Vinci" from the Odero Yard at Genoa, for the Italian Navy.
- 15th (Sun.) Launch of the first-class battleship "Giulio Cesare" from the Ansaldo Yard at Sestri Ponente, for the Italian Navy.
- 18th (Wed.) Engagement between rebels and Imperial Troops at Hankow.
- 19th (Thur.) Landing of the Italians at Benghazi.
- 21st (Sat.) 106th Anniversary of the Battle of Trafalgar.
- 23rd (Mon.) Launch of Cruiser Training-Ship "Chao-Ho" from the Elswick Yard, Newcastle-on-Tyne, for Chinese Navy.
- 25th (Wed.) Launch of first-class armoured cruiser "Australia" from Messrs. John Brown & Co.'s Yard, Clydebank, for the Royal Australian Navy.
- 30th (Mon.) H.M.S. "Venerable" paid off at Portsmouth, and recommissioned the following day for further service in Atlantic Fleet.

NOTICES OF BOOKS.

Charles Philip Yorke, Fourth Earl of Hardwicke, Vice-Admiral, R.N.,
a Memoir by his daughter LADY BIDDULPH OF LEDBURY. With
Portraits. London, Smith Elder & Co., Waterloo Place, S.W., 1910.

The life of the subject of this Memoir is a typical instance of the career of the scions of our British aristocracy during the eighteenth and nineteenth centuries: they served their apprenticeship to the trade of war in their youth in the naval and military services of the crown; then sold out or went on half-pay and entered the political arena, standing for Parliament or taking office under the Government; finally they retired to spend their declining days in honoured ease as county magnates, Justices of the Peace and patrons of sport and all local works of utility and charity. The noble authoress has prefaced the Memoir with an historical sketch of the Yorke family, which like so many others of the English nobility owed its dignity to the brilliant talents and conspicuous public services of its founder, Philip Yorke, who was called to the Bar in 1715, and passed through all the stages of official advancement in the profession till he became Lord Chancellor twenty-two years later, and was created Earl of Hardwicke. His sons followed in their father's footsteps and attained to high offices of State; one of them became First Lord of the Admiralty, and his son entered the Royal Navy and became an Admiral, saw much service, was knighted and finished a long and honourable career as First Sea Lord of the Admiralty. This Sir Joseph Yorke was the father of the subject of the present Memoir, Charles Philip Yorke, who was presented to Lord Nelson in his boyhood and entered the navy at the age of fifteen, just after a long succession of piping times of peace had been assured by the final fall of Napoleon. This was a subject of much regret to the young midshipman. In one of his early letters to his father he writes, "The service is very stale for want of war, every day the same story." And Lady Biddulph, whose pious care has compiled this narrative of her father's varied and eventful career, says, "I have often heard him say that his ideal of a happy death was to be killed by a round shot on his own quarter-deck," a sentiment worthy of a sailor and an Englishman.

But the long wars had, by clearing every other navy off the face of the ocean, made Britannia absolute mistress of the seas, and British men-of-war had the undisputed task of keeping the peace on all the waters of the globe. Charles Philip Yorke had not long to wait for the smell of powder; his father's interest procured his appointment to the flagship of Lord Exmouth in the expedition against Algiers. Lady Biddulph has prefaced each successive episode of our hero's services by a brief sketch of the political situation, and her historical narratives are lucid and accurate, but the long period of impunity enjoyed by the Barbary Corsairs was not simply owing to the fact that the great Naval Powers of Europe were occupied in opposing one another; both England and France rather encouraged the Corsairs because their baleful activity paralysed the commerce of Spain, Portugal, and Italy, and threw all the carrying trade of the Mediterranean into the hands of the Powers who were strong enough to make their flags respected by the pirates. English merchant-vessels had

passes which exempted them from capture by the Algerines. Lady Biddulph also errs in ascribing the title of Dey to the Rulers of Tunis and Tripoli. Dey is an elective title in Turkey and was only applied to the elected ruler of the military republic of Algiers; in Tripoli and Tunis the Regency was an hereditary despotism of the ordinary Oriental type, and the ruler was designated by the title of Pasha or Bey.

After his baptism of fire at Algiers, young Yorke had a few years of peaceful experiences on the North American Station from which he was recalled to more active service in the Levant, where the Greek War of Independence was raging and both Turks and Greeks were carrying on an indiscriminate piracy under the pretence of regular war. Lieutenant Yorke was in command of a gun-brig and the British naval officer had to act as an International Police Superintendent and Diplomatic Agent on his own responsibility; there was no telegraph in those days, nor even a regular post. Disputed matters were speedily and satisfactorily settled without reference to higher authority. The Bey of Rhodes having insulted the British Consul, was soon "brought to his senses" by the visit of a British man-of-war. "We took the old way and began at him, when he came to terms. One 18-lb. shot through his palace made him know that we did not always bark and never bite." Mr. Yorke found the Turk to be an honest ruffian, the Greek a plausible knave. "Though his sympathies were with the Greek cause, of the two he preferred the Turk, as by far the best to deal with." Most Englishmen who have lived in the Levant share his opinion.

The greater part of this story is told in the letters written to his father and others at home, which are full of keen observation and insight into affairs and abound in racy expressions of a nautical flavour. Thus, alluding to a statement in an English newspaper that the Greeks at Missolonghi had sixty pieces of cannon, he writes, "I can only say from personal knowledge that if it has sixty pieces of cannon they are all on the wrong side, or where the Dutchman had his anchor."

He made the acquaintance of Lord Byron at Missolonghi, and seems to have liked and esteemed him; later on he visited the coast of Syria where he paid a visit to Lady Hester Stanhope in her strange palace among the Druses of Mount Lebanon. The death of his father recalled him to England and the subsequent death of his uncle raised him to the Peerage after he had sat in the House as member for Reigate and had unsuccessfully contested Cambridge in the Tory interest. His Jeremiads over the results of the passing of the Reform Bill remind one much of what may be heard to-day. "We must become Republican England as well as Republican France (damn France, she is the root of all evil and the branch of no good). It matters little how; whether by reform which will produce national bankruptcy, or by a starving population which will produce rebellion and civil war." Yet ten years later, when it was evident that Reform had not so far produced national bankruptcy, we find him equally strenuous in opposition to measures designed to give relief to a starving population. The fiscal question was then, as now, uppermost in men's minds and a subject of keen debate, and Lord Hardwicke, a Tory and a landowner, was a staunch supporter of the protective system. A few years later, speaking at an agricultural meeting of the Western Cambridgeshire Association he said: "The last agricultural meeting I had the pleasure of attending was in the golden days of protection, and we all thought we could not do without it. I am happy to find, however, now that the Legislature has thought fit to abolish those fiscal duties, that I formed a wrong

opinion on the subject."—*Tempora mutantur et nos mutamur in illis.*

There are many interesting letters here from Disraeli, Sir Robert Peel, John Wilson Croker, and other well-known statesmen and politicians of the time. Lord Hardwicke was for some time a Lord-in-Waiting to Her Majesty Queen Victoria, and in that capacity was in attendance on King Frederick William of Prussia, and the Czar Nicholas of Russia during their visits to England, became a favourite of both of these Sovereigns, and at their invitations visited them both at their capitals of Berlin and St. Petersburg. His letters to his wife contain interesting descriptions of the Court life at both places.

The King of Prussia who was persistently and most unwarrantably libelled by our *Punch* under the sobriquet of "King Cliquot," was a most worthy man and a benevolent Father of his people. Lord Hardwicke thus writes of his appearance in public: "No guards, no escorts, not even a guard of honour or police, all affection and order. He walked about among thousands of his people like a father among his loving children. He was remarkably well received everywhere, and it made him very happy. He is very familiar with his officers, and talks to his servants with kindness and good humour, frequently making them laugh and laughing in return. In short, I am much struck with the difference of form in the Constitutional and Despotic country and with the pomp of the former and the familiarity and freedom of the latter."

The comparison is between England and Prussia, which was then as despotically governed as Russia is now.

Lord Hardwicke also found the Czar Nicholas not so black as he was painted afterwards in the time of the Crimean War. He also visited other Courts at Stockholm and Cairo, in both of which the throne was occupied by men who had risen from the rank and file of the army, Bernadotte and Mehemed Ali Pasha.

In the year of Revolutions, 1848, Lord Hardwicke returned to active service in expectation of a European war, and commanded a battleship in the Mediterranean. Twenty years before, he had been employed in effecting the retrocession of Crete to the Turks as had been decided on by the great Powers, and on that occasion had been most successful in preventing the effusion of blood by persuading the Greeks to lay down their arms; and now he was equally successful in mediating between the extreme revolutionary party and the Loyal Piedmontese troops at Genoa, and in saving that city from pillage and destruction at the hands of the mob. A detailed account of this now forgotten affair is here published for the first time in private letters never intended for the public eye, and Lady Biddulph has added the official correspondence relating to the affair. Some accusations of violating the laws of neutrality by his efforts in the cause of peace and humanity were brought against Lord Hardwicke, but his conduct received the warm approval and encomiums of Lord Palmerston and of all his official superiors. King Victor Emanuel gave him hearty thanks and a decoration. But the insinuation that he had "exceeded his instructions" at Genoa was afterwards made use of by a Whig Cabinet to refuse him employment in the Crimean War and to place him on the retired list. He twice held office under Lord Derby's Premiership, once as Postmaster General, the second time as Lord Keeper of the Privy Seal, was Lord Lieutenant of his County, and presided over a Royal Commission on the state of the Navy. The account of the home life at Wimpole, the ancestral seat in Cambridgeshire where he spent his declining years are

full of interest. He died of heart failure in the seventy-third year of the century and of his age.

This interesting and clearly written book is a worthy memorial of a worthy subject. The portraits of members of the Yorke family (two of them by George Romney) are excellently reproduced. There is not a single misprint in the book. The only mistakes are due to a misreading of manuscript, and they are few; *e.g.*, at page 230, "concentrated his fire in and around the arsenal" should be "concentrated his force in and around the arsenal," and at page 145, Hafir Aga should probably be Hafiz Aga.

The Outlines of Military Geography. By Colonel A. C. Macdonnell, late R.E., 227 pages, with an index, and 19 maps. London, 1911. Hugh Rees & Co.

This book has been written with the object of assisting students of military history, by giving them a general knowledge of the main features of countries which have been theatres of war in the past, or which, on account of their situation, possess a special interest for Great Britain.

The first two chapters are in the nature of an introduction, dealing with larger questions, such as sea power, considerations affecting the choice of a theatre of war, and the general influence upon strategy of topographical features such as mountain ranges, rivers and deserts. The next 100 pages are devoted to a survey of the strategical geography of various countries, treated separately, including France, Holland, Germany, Western Russia, Austria-Hungary, Servia, Italy, Turkey, Bulgaria, Morocco, Abyssinia, India (North-west Frontier), Asiatic Turkey, Persia and the Far East.

It has not, of course, been possible in so limited a space to give more than an outline of the regions chosen for discussion, but it is an outline remarkable for lucidity and avoidance of unnecessary detail. Nevertheless, it is a pity, in the opinion of the writer of this notice, that the author should have stated his conclusions regarding certain future contingencies without devoting rather more space to elaborating the arguments upon which his conclusions are based. A case in point is the possible violation of Belgian neutrality in the event of a future war between France and Germany.

It is also to be regretted that terms such as "strong" or "modern" should have been used in connection with some of the coast defence works referred to in this part of the book. While noting the above points it must be added that they are of secondary importance and do not impair the usefulness of the book as a military geographical study.

The chapter on the North-west Frontier of India gives a clear summary of the larger strategical problems which have engrossed the attention of so many soldiers and statesmen of our Indian Empire. The concluding chapters dealing with strategic waterways and projected railways, defended ports, coaling stations, etc., are among the most important and interesting in the volume, and will be found especially useful by candidates for the Staff College entrance examination.

The maps, which include the Navy League map of the British Empire, form an invaluable complement of the work, and are contained in a separate atlas—an arrangement which greatly facilitates reference. Of especial interest are: Map 3, the railway and water routes in Europe, Asia, and Africa; Map 14, Persia and Afghanistan; and Map 15, railways in Asia Minor. Taken as a whole, Colonel Macdonnell's book may be considered as one of the most valuable contributions to the subject of

Military Geography which have appeared in this country of late years; and its price certainly appears very moderate, considering the number and quality of the maps. It is a book to be thoroughly recommended for students.

Hannibal's March through the Alps. By SPENSER WILKINSON, Chichele Professor of Military History. With two Figures and Four Maps. Oxford, at the Clarendon Press, 1911.

In this brochure the Chichele Professor has made an excursion into the regions of classical literature and ancient history. From a close study of the accounts of the famous march in the pages of the historians Polybius and Livy, from observations of the obvious errors of some of his predecessors in the same field, and from the latest researches made by French military topographers in these days, he has constructed one more theory of the route taken by the Carthaginian Army from Gaul into Italy, to add to those already advanced by Arnold, Hennebert, Mommsen, Freshfield, and many other authorities both ancient and modern, including Napoleon himself, who decided the matter to his own satisfaction by one of his usual absolute announcements; but the strategists of the Punic wars had no maps to guide their movements, nor roads to determine their line of march.

Mr. Spenser Wilkinson points out that previous historians in studying the subject have confined their attention to the passes over which high roads have been made in modern times; whereas there are many others which would be equally available for an army unprovided with wheeled transport. He follows the French Colonel Perrin in his selection of the Col de Clapier as the pass crossed by Hannibal; and he traces his march from his passage of the Rhone just above the delta (a point in which he differs from Napoleon's expressed opinion) up the valleys of the Ière and the Are to the Col de Clapier, by which he descended into the plain of the Taurini (Turin); and he supports his theory by a chain of closely reasoned arguments drawn from the descriptions of Polybius, who may be said to have had his information almost at first hand, and from Livy, who compiled his account from that of Polybius, and also from other unknown sources. We regret that want of space prevents us from following his argument, there will probably always be a divergence of opinion on the matter, and absolute certainty is hard to attain in the absence of all local tradition. There is an old bridge (probably Roman) at Rapallo, between Genoa and Spezia, called by the natives Hannibal's, on a route which it is absolutely certain Hannibal did not take. Mr. Spenser Wilkinson's arguments are certainly plausible, and he has made out a specially strong case for the Col de Clapier. The figures which illustrate the book are photographic views, one of the Col itself as viewed from Turin, the other of the plain at its foot. The maps are quite up-to-date, with modern place-names, roads and railways; it is a pity that the route outlined in the text as taken by Hannibal's Army is not marked upon them.

Besides an introduction of his subject and a peroration which gives his reasons for the rejection of previous hypotheses, the work is divided into chapters on the Passage of the Rhone, the March from the Rhone to the foot of the Alps, the First and Second Battles with the Gauls, and the Pass and Descent into the Plain. It is a valuable contribution to the literature of the subject.

RECENT PUBLICATIONS OF MILITARY INTEREST.

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JULY, 1911. PUBLISHED QUARTERLY.

PART II*. SECTION I. HISTORICAL—*continued.*

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Controller of His Majesty's Stationery Office*

TRAVEL AND TOPOGRAPHY.

The Provinces of China. 187 pp. 8vo. Shanghai. The National Review Office. 1910. 3s. 6d.

This book consists of articles which have appeared in the "National Review" (China) reprinted and published as the "National Review Annual, 1910." The preface is by Colonel C. D. Bruce of the Shanghai Police. He states that the articles are intended "to provide a fairly concise survey of the possibilities of each province, and that they are gathered from various sources, chiefly Customs reports and Richthofen's and Little's works, with no pretence at originality."

A chapter is devoted to each of the nineteen provinces, and three further chapters to the dependencies of Tibet, Hsin-chiang, and Mongolia. Two articles are added, one on the events of the first year of the present Emperor (December, 1908, to December, 1909), and one on the government of China. A list of books of reference concerning the Chinese Empire is also given.

The book is marred by clerical errors. To quote one instance. On p. 4 a list of the estimated populations of certain countries is given. In this the British, Russian, and Chinese Empires have been credited with ten times their actual population. Similar errors occur in the transliteration of place-names. On p. 3 the Chinese name of the K'ai-fêng Fu-Ho-nan Fu Railway should be Pien-lo. It is given as Pien'o.

On p. 179 it is stated that "the Army Board (Luchun Pu) . . . is responsible for the military forces of the Empire. The Board of War (Ping Pu) controls the provincial forces only." This is a misstatement, Ping Pu is merely the old name for the War Office, which controls the regular forces of the Empire. While the Viceroy and Governors are responsible to it for the efficiency of the "provincial" troops.

If revised this would prove a useful book of reference.

* The titles of all books are given in English: this does not indicate that the books have been translated. The original title in the language in which a work is written, if not in English is given in brackets.

Modern Belgium. (La Belgique Moderne.) By Henri Crerriaut. 390 pp. 8vo. Paris, 1910. Flammarion. 2s. 11d.

Monsieur Crerriaut's book is of deep interest to people interested in Belgium. Gifted with a style that is both vivid and witty he puts before the reader a clear idea of the present state of development of the Belgian people. The inherent antagonism between the Flemings and the Walloons, the wide difference between the agricultural and the industrial population, the practical commercialism and the energy of the whole nation, are all convincingly portrayed. A study of this book is also suggestive of various means by which the longstanding friendship between Great Britain and Belgium, which is now rather on the wane, might be again revitalized.

National Life and Administration in Abyssinia. (Staatliche Einrichtungen und Landessitten in Abessinien.) By Georg Coates. 79 pp. 8vo. Berlin, 1909. A. Glaue. 1s.

This is a short pamphlet describing the Abyssinian habits of life and the methods of administration in force in the country. The author, who spent the years 1906-07 in Abyssinia, mentions the fact that while much has been written about the geographical and historical details, little is generally known on the subjects of the matters which he deals with. The headings under which he writes comprise the Emperor and Court, army, government, justice, religion, domestic life, food, and industries.

Across the Roof of the World. By Lieut. P. T. Etherton, F.R.G.S., F.Z.S., 39th Garhwal Rifles. 429 pp., with map, index, and numerous illustrations. 4to. London, 1911. Constable. 16s.

This is a story of an adventurous journey through the heart of Central Asia, undertaken mainly for the purposes of sport. According to his original plans, the author intended, within the compass of a year's leave, to shoot over the Pamirs, the Thian Shan, and the Great Altai Mountains. The forces of Nature, however, eventually proved too strong for him, and after a desperate struggle with the elements, and after being severely frost-bitten, the last part of the programme, the shoot in the Altai, had perforce to be abandoned. With the authority of experience, the writer warns those who may in the future propose an expedition into the inhospitable regions visited by him, of the danger of attempting too much in a given period of leave. It is of supreme importance in these matters to select the proper season for travelling and shooting: to start too soon or to return too late must spell disaster in the end or, at any rate, detract largely from the success and pleasure of the expedition.

In addition to the interest of the book from the point of view of the sportsman, there is much in it of value to the military reader. The writer's observations on the Chinese and Russian soldiers whom he met are worthy of note; much also may be learned from his experiences in dealing with the many and varied tribes and clans with which his wanderings brought him into contact.

The author's descriptions of the difficulties of movement and transport in and about the Pamir region are worthy of consideration. If a small caravan, such as accompanied Lieut. Etherton, experienced trouble on the road, the difficulties which would attend the movements

of troops in these rugged mountains will readily suggest themselves to the military reader.

MISCELLANEOUS.

War Rights on Land. By J. M. Spaight, LL.D. 520 pp. 8vo. London, 1911. Macmillan. 12s.

This book goes most thoroughly into the subject of International Law so far as land forces are concerned in war. The author discusses and explains the various conventions arrived at by the international conferences at Brussels and the Hague, and also deals fully with the Geneva Convention.

Chapters are devoted to the following among other subjects:—Commencement of hostilities, Qualifications of belligerents, Means of injuring the enemy, Spies, Flags of truce, Capitulations, Prisoners, Military occupation (war rights of the occupant and of the inhabitants), Neutrality Convention.

The whole forms a most interesting and instructive book.

The Entrance Examination Papers for the Staff College for 1911. (Die Aufgaben der Aufnahmeprüfung 1911 für die Kriegsakademie.) By Major Kraft. 76 pp., with 4 figures in the text. 8vo. Berlin, 1911. Mittler. 1s. 6d.

The papers comprise questions on the following subjects:—

Military history, tactics, arms and ammunition, fortification, reconnaissance, sketching, history, strategical geography, languages and mathematics. Solutions to all questions are given.

A Practical Study of Intelligence Duties. (Etude pratique du service des renseignements.) By Captain de Rudeval. 90 pp. 8vo. Paris, 1910. Charles Lavauzelle. 1s. 3d.

This book is a reprint from a series of articles in "Le Spectateur militaire." It contains a very practical collection of hints as to the carrying out of intelligence duties, backed by a large number of historical examples.

The first portion of the book contains a historical summary of the influence in the past of good or bad intelligence systems, with a very short précis of the various legal penalties which detected agents may have to suffer. In the second part the various methods of obtaining information in peace and in war are considered in some detail. In the third part various "ruses de guerre" are described or suggested.

The main points brought out by the book are:—

- (1) The vital importance of a good intelligence system in peace and in war.
- (2) The impossibility of improvising such a system after the outbreak of hostilities.

Moltke's War Lessons. Group IV. Vol. II. (Moltke's Militärische Werke. IV. Kriegelehren. Zweiter Teil.) By the German General Staff. 179 pp., with 31 maps. 8vo. Berlin, 1911. Mittler. 6s. 9d.

These War Lessons have been compiled by the German General

Staff from Moltke's memoirs and military works. They are being published in three volumes under the following headings:—

Vol. I.—The Strategic Preparation for Battle.

Vol.—II.—The Tactical Preparation for Battle.

Vol. III.—The Battle.

The first volume was reviewed on p. 159 of No. 17 of R.P.M.I. The second volume is sub-divided into chapters which deal with "Order of Battle," "Intercommunication," "The Service of Reconnaissance and Protection," "Marches," "Rest," and "The Theatre of the Movements of the Armies in 1870-71."

The various chapters contain numerous examples from military history, and are profusely illustrated by maps.

The German Officer. (Der Offizier.) Alfred Bristau. 124 pp. 8vo. Strassburg, 1911. Joseph Singer. 2s.

In the preface the author mentions the numerous publications, some favourable and some adverse, which have appeared recently on the subject of German officers, and expresses his intention of dealing impartially with the principal questions involved, whilst claiming that long experience and intimate knowledge of the officer class render him fully competent to pronounce a verdict. Herr Bristau is a retired German officer, so that this claim is probably well founded.

He begins by drawing a comparison between the officers of the present time and those of former days, 25 and more years ago. He shows that the officer class was formerly recruited from the sons of old officers or civilian officials, but that nowadays it is impossible to keep up these sources of supply. A German officer stands in need of pecuniary assistance for 19 years from the date of his first commission, and parents of the officer and official classes rarely have sufficient means to provide the necessary funds. The average total cost of an officer's career is given, showing that the infantry officer requires nearly £700 in addition to his pay, this sum being spread over the whole period of his service.

A private income of at least £45 per annum is necessary on first joining, and it is impossible for the regimental officer to live on his pay for the first 19 years of his service.

A list is given showing the cost of the articles of an officer's clothing and equipment, showing how very much less German officers have to pay for their uniform than British officers—for example, the price of a field service cap in Germany is 5s., of a sash 20s., of a sword 25s., and so on.

The author goes on to say that a vastly higher standard of general knowledge is now necessary for German officers, partly owing to modern tactics, which require high qualities of intelligence and initiative, and partly owing to the spread of education among the rank and file. Even the youngest officers are expected to lecture to their brother officers during the winter, whilst they are constantly lecturing to their men on all kinds of subjects. The standard of education and intelligence in a national and universal service army is naturally higher than that of a professional army, as the former is drawn from the best of the nation, and the general standard of the German people is probably more elevated than that of any other country.

Of late years the existence of two distinct classes of officers has

been much discussed in Germany. Herr Bristau deals with this question, and acknowledges, with some regret, the necessity of admitting members of the middle classes, since it has now become impossible to provide the requisite number of candidates from the aristocracy and the sons of officers. He insists, however, upon the importance of bringing these young men up to the level of the others, in order to maintain the status of the officer class, to uphold its traditions, and to preserve it from all taint of commercialism.

An interesting discussion follows on the question of promotion, which is slow in the German Army up to the rank of major. Tables are given, showing the total length of service of the senior officers of each rank in the Prussian Army; that for the infantry is as follows:—

2nd Lieutenant	...	9 years.	
Lieutenant	...	17 "	
Captain	...	26 "	
Major	...	32 1/2 "	
Lieut.-Colonel	...	35 1/2 "	
Colonel	...	38 "	(Corresponds to a Brigadier-General in the British Army, as he has 3 battalions under his command.)

As the regimental system of promotion does not exist, the advancement of officers is more or less uniform throughout the Prussian Army. This also applies to the Bavarian and Saxon Armies, where promotion is, however, considerably more rapid. The author criticises adversely the system of selection obtaining in the Prussian Army, which he considers to be exaggerated; he heartily approves of accelerated promotion for officers of the General Staff, for those destined for higher command, and as a reward for especially meritorious service, but is of opinion that, with these exceptions, it should be discouraged and discontinued. He shows that numerous official posts in civil life are open to retired officers, i.e., as Commandants and subordinate officers of recruiting districts, appointments in the Gendarmerie, as Postal Directors, Superintendents of tax-collecting, etc.

Chapter IV. deals with the emoluments of officers, urging the great need of reforms and increase of pay, pointing out the various injustices of the present system, and enumerating the many cuttings from the pay of officers, although these are on a considerably lower scale than in the British Army.

The question of officers getting into debt is next discussed, together with various means of meeting the evil. Gambling and women are adduced as the principal causes, as also the pernicious habit of tradesmen to allow their military clients practically unlimited credit.

Chapter VI. treats of marriage and the difficulties it presents to the average German officer. The author examines the system by which young officers are forbidden to marry unless they are in possession of a certain private income, and, although he admits the system to be a sound one, asserts that a great deal of fraud and trickery is practised in this connection, especially by the civilian fathers-in-law of officers. Owing to the want of money in the higher

classes, many officers are nowadays compelled to seek their wives from commercial families. An officer is not, however, permitted to marry until the lady's social status has been officially examined and found to be suitable.

In the final chapters the author discusses small outlying stations and their disadvantages (cf. Lieut. Bilse's well-known work on the subject) also the question of Courts of Honour and duelling. He pronounces duelling to be a necessary evil, still indispensable to safeguard the honour of the officer, though he is of opinion that the resort to arms might be avoided in many cases.

Pathans. Handbooks for the Indian Army. Official. 262 pp. 8vo. 2 appendices and map. Calcutta, 1910. Superintendent, Government Printing Press. 4s. 6d.

This handbook is one of the series on the various classes of natives enlisted in the Indian Army. It contains, in concise form, trustworthy and up-to-date information regarding the history, religion, customs, characteristics, and military value of the many Pathan and allied tribes inhabiting the North-West Frontier of India, Baluchistan, Afghanistan, and scattered in various parts of India.

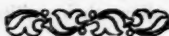
Useful tables showing the tribal divisions are given; and the information as to fighting strengths and characteristics show what a potent factor the Pathan tribes, armed as they now are, with modern rifles, and united against a common foe, constitute in all questions affecting our North-West Frontier and Afghanistan, and the Muhammadan creed in general.

The work is well arranged, and intended for the instruction of young officers, and as a book of reference.

Urdu Reader for Military Students. By F. R. H. Chapman. 178 pp., with vocabulary. 8vo. London, 1910. Crosby Lockwood and Son. 7s. 6d.

The book is divided into six parts. Part I contains notes on reading and writing Urdu; the Urdu alphabet; and lists of useful words (in Urdu and romanized Urdu characters). Part II comprises a series of easy exercises illustrating simple rules of Grammar and Syntax. Part III consists of easy selections from various works. Part IV contains military phrases, and military selections; and Part V historical selections. Part VI is the vocabulary containing the Urdu words in the text.

This graduated Reader should prove decidedly useful to the officer learning Urdu.



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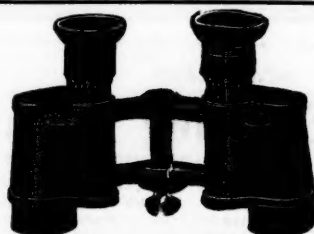
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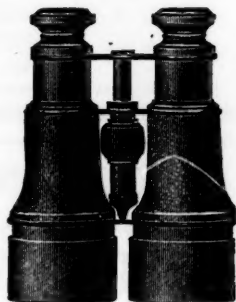
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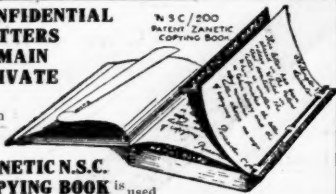
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